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September 1957

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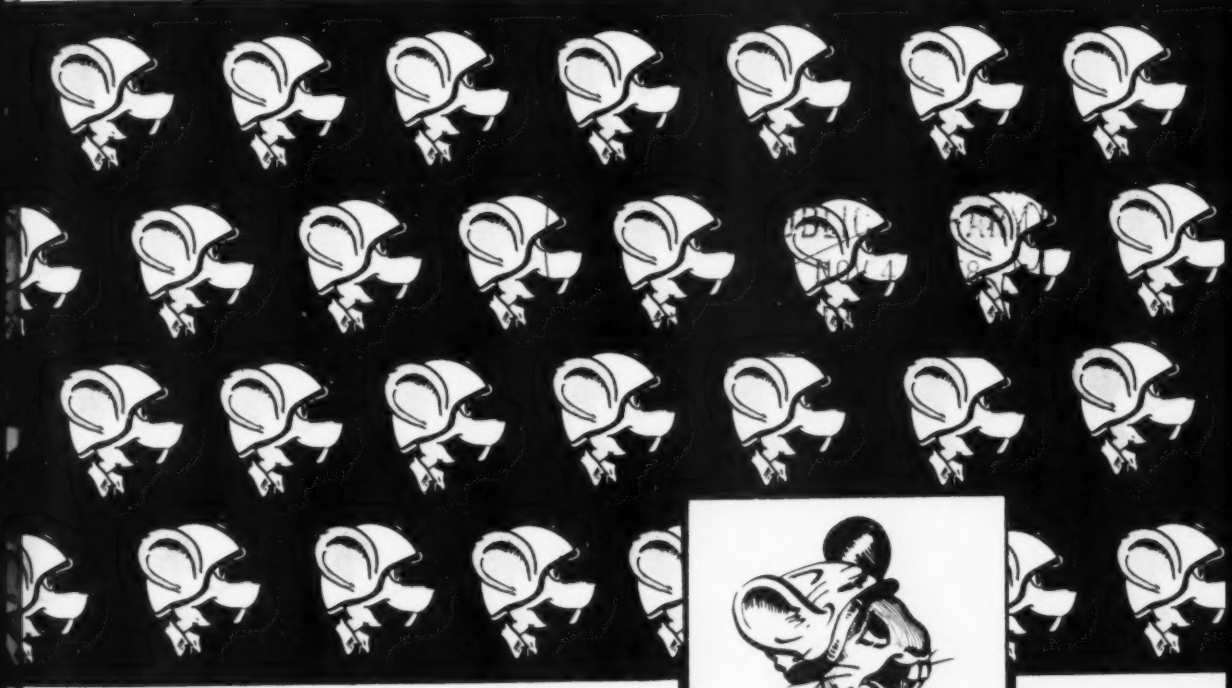
THE NAVAL AVIATION SAFETY REVIEW



in this issue

ANYMOUSE'S 10th ANNIVERSARY

page 4

SAVE A LIFE

SUBMIT AN

ANYMOUSE

ANONYMOUS REPORT OF HAZARDOUS

TIME & DATE ..... AIRCRAFT TYP

CHECK AS APPLICABLE:

TYPE FLIGHT: TRAINING ☐ SERVICE ☐ COMBA

CLEARANCE ISSUED: VFR ☐ IFR ☐ **ACTUAL W**

MANEUVER INVOLVED: TURN-UP ☐ TAXIING [

DESCENT ☐ APPROACH ☐ LANDING ☐ ROL

POSITION IN AIRCRAFT: PILOT ☐ CO-PILOT [

RADAR OPERATOR ☐ GUNNER ☐ OTHER ☐

NARRATIVE: Give details such as: (1) What h
do? (4) Results (5) What would you do n
(6) Recommend to prevent or re
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Headmouse

Cordially requests your presence at the

Tenth Anniversary

of

Anymouse

Page Four, Approach, September 1957

NAVY

you
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NO

NAVY—

"They're mine! All mine, cause I filled out one of these

....a "job well done"

It is with a great deal of pleasure, but with no complacency, that I make this general report on the Navy's aviation safety effort for Fiscal 1957. The number of fatalities was reduced from 410 for fiscal 1956 to 349 for fiscal year 1957, a reduction of 15 percent. The number of aircraft accidents was reduced from 1148 in 1956 to 1298 during 1957, a reduction of 10.3 percent. It appears that our official rates for Fiscal 1957 will be 3.06 major accidents and .83 fatalities per 10,000 flight hours. This major aircraft accident rate is a new low record. Credit is due all those who have worked so conscientiously to achieve this mark. Special credit is due those units that completed the entire period without a single aircraft accident. To all of you I extend my appreciation and congratulations for a "job well done".

I have covered briefly some of our more pleasant accomplishments during the past year; now let us take a look at the other side of the ledger. The entries on this side are not nearly so pleasant because each of the 349 entries here is the name of an individual whose life was lost in an aircraft accident. Several of these men were known to you personally; some were known by reputation; others were known only as a name on an aircraft accident report, but you know all of them now as a "statistic." How did these men end up becoming a "statistic"? How many made mistakes which caused their untimely end? How many were killed by the aircraft designer; by faulty material or workmanship that went into the aircraft; by poor maintenance procedures; by inadequate training; or by improper or inadequate supervision? Finding the answers to these questions and applying them to prevent future accidents is our business — and yours.

There were 240 fatal accidents in Naval Aviation during Fiscal 1957 which resulted in death of 342 military personnel and 7 civilians; a total of 91 of these accidents, or 39 percent, were caused primarily by pilot error; 13 additional accident reports listed pilot error as a secondary or contributing cause of the accident; 37 accidents were attributed primarily to material failure or malfunction with personnel error contributing to 19 of the 37; weather was considered the primary cause factor in 2 and the secondary cause in 11 accidents; 1 accidents were attributed to supervisory personnel; the primary cause of 102 accidents remains undetermined. A bit of simple arithmetic reveals that human error played an important part in 130 of the 240 fatal accidents — this is 54 percent, which I am sure you will agree is too high.

The end of one fiscal year is the beginning of another and the accomplishments of the old year must not be allowed to overshadow the tasks to be done in the new. We *must* reduce the number of lives being lost in aircraft accidents; we *must* save aircraft and equipment through reducing accidents. By fulfilling these objectives, we *will* increase the combat potential of our fleet.

RADM Allen Smith, Jr., Director

R

V.3 no.3

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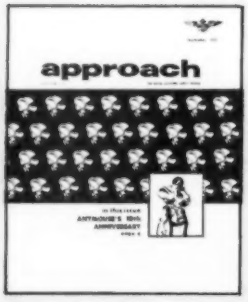

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Contributions are welcome as are comments and criticisms. Address correspondence to Director, U. S. Naval Aviation Safety Center, NAS Norfolk 11, Va.

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Letters to the Editor

Approach welcomes letters from its readers. Send yours either via official channels or direct on Anymouse forms. All letters should be signed. However, names will be withheld on request.
Address: *Approach* Editor, U. S. Naval Aviation Safety Center, NAS Norfolk, Va.

'HUP-2-3-4'

Sir:

Page 34 of June 1957 *Approach* mentions a HUP-2 retrieving three men from the water at one time. The article notes, "This is believed to be the first time three men have been rescued from water at one time using a HUP-2." I do not want to take anything from the individual responsible for this splendid rescue; however, in the past, several HUP-2 pilots have made multiple rescues.

Our records indicate that in January 1955 Lt J. B. Simon, while attached to this command, made a four-man pickup from the water in a HUP-2 and in January of this year Lt. W. P. Carlin retrieved three men using the same type aircraft. Naturally, multiple rescues involving three or more individuals is not commonplace in the HUP-2 because of allowable payload limitations and conditions of wind and temperature. Still, such rescues are not a new innovation since they have been accomplished in the past and will undoubtedly be accomplished in the future by the Navy's helicopter rescue pilots. It is recommended that all potential multiple rescuees pray for cool air, strong winds and a lightly fueled helicopter. Without these factors it probably can't be done.

J. A. HARMAN

Thanks. We join rescuees in praying for cool air and more copies of the Ireland-Kight retrieving net.—Ed.

CHOP TALK

Sir:

Many of us chopper pilots have experienced troubles similar to those expressed by the "Breezy Point" Anymouse (June *Approach*, p 18) and we agree 100% with I.M. Rotorwing (p 32, same issue) that the majority of such trouble could be avoided if ship's people were more familiar with NavAir-Lant and NavAirPac Instructions concerning helicopter operations. How about letting these people, who do not get to see *Approach*, know of our mutual problems and circulate this letter to them?

CHOP CHOP

Good idea! Anybody in particular you'd like to get this material? APPROACH has done this from time to time on similar items though. All major ships utilizing 'copter's get at least one copy for the aviation liason officer.

Incidentally, much credit is due Cdr J. A. Harman, HU-2, Lakehurst, who supplied the very appropriate idea and much of the text for Rotorwing's epistle. Any other 'copter people with a message for Garcia?—Ed.

NEW SLANT

Sir:

Re your spread on wheels shacks in the July issue (page 20-21) . . . you didn't mention our warning to others. At night, straight glass sides are reflection nightmares, and so we're modifying ours to have slanting panes, somewhat like the first two pictures in your layout . . . Suggest you pass the word to others . . .

LARRY BATTLE, ASO
NARTU Columbus
DON JUDD, ASO
NARTU St. Louis

Sorry, we goofed. You did warn us—Ed.

BEECH MASTER?

Sir:

VIVA LCdr Corner ! ! ! (June *Approach*) . . . Add my vociferous approval to all remarks made by that champion of the Group I, LSD type of motivated NA in a proficiency flying billet. It seems a shame to me that it is necessary to place Lt's and LCdr's in said billets when they want to fly. Half the Officer data cards I saw in the fleet were marked, ". . . any NAS . . ."

Also, there appears to be a slight inconsistency, in the amount of formal instrument training required for naval aviators. NavAirPac sends fleet aviators to FAWTU once a training cycle even though these gents are piling up 30-40 hours a month with an instrument syllabus in type right in the cycle. Yet the 8-hour-per-month *Beech*-driver is responsible for maintaining his own proficiency and renewing his own card!

Why not a combined JTTU-FAWTU organization with a two-fold mission? Proposed length of course is approximately two and one-half weeks. Ground school checkout lectures for operational type aircraft. Instrument procedures with a windup lecture or two on recent changes in fleet and aircraft operations and tactics. Advantages:

1. Updating the grounded jockey who is now forced to depend on Dave Garroway for the latest in naval aviation.
2. Morale boost.
3. Improved and more confident instrument pilots.
4. Retention rate increase due to all the above factors.

The skeptics will point out that the limited amount of time in operational type would not be worth the cost of supporting such an outfit.

But OpNav considers 15 hours of night time and 20 hours of instruments a year sufficient to keep proficient.

I'm sure our friends in BuPers will be quick to assert that if this program could contribute to the retention of 10 Lt's a year, the program would break even . . .

EARTHMOUSE
Lt, USN

"Harrumph, well, unaccustomed as I am to public squeaking, I shall nonetheless attempt to say a few words appropriate to this occasion. No use being mousey y'know. How's it feel to be starting the second half of my twenty? Well, a lot of good Swiss cheese has aged in this first decade of mine. And I've had my share of it, yessir. I can't claim to as much stick time as old Gramps (have another olive in your cheese juice, Gramps), he's the only one here who can talk about the smell of castor oil and the wind through the bailing wires, but I've seen some pretty tremendous changes in Naval Aviation since I first soloed the J-bird. Back in 'ought-forty seven I was writing reports about iron birds like the AF-2W, TBM-3S, F6F and the F4U. And now, only ten mouse-years later, I'm writing in to NASC about TF's, F3H-2N's, A4D's, R4Y's and F8U's—only one left from the old days is the old faithful AD, eh Gramps? One thing will still be the same though, if the builders still include cockpits in the '67 models—there'll still be hairy tales, and Anymice to write in about them. 'There I was at angels 88', they'll say, 'dodging cosmic clouds at mach 8 (my thermonuclear afterburner wouldn't light off you see, so I was left with only the 88,000-lb thrust of my J-788). Anyway, suddenly . . . . . .'

Well, enough of this mousing around, I wanna whack off another wedge of this delicious cheesecake. Thank you fellas, for the fine party, and you, Headmouse, for being such a fine mouseter of ceremonies. Grampaw, your N3N is still down until they find some low-enough octane gas around here, so let's you and I go put our feet up on my desk and we'll kick around some hairy tales . . . . .

Illustration by R. B. Trotter

Happy Anniversary anymouse

Readers of *Approach* and its brethren in the aviation safety field should have little difficulty in identifying (l to r) Major C. R. Terror, USAF, of the MATS FLYER; Spoiler; Major Rex Riley, USAF Flying Safety Officer; AirPac BULLETIN's PacRat, who was unable to attend in person; Anymouse's handyman, Gleep; Sgt. McGuire, USAF, of the MAINTENANCE REVIEW; Master of Ceremonies Headmouse; Anymouse and naval aviation's sage, Grampaw P. S. Pettibone. Next is FLYING SAFETY's Mal Function and, on the deck, is Lou Snutt — both of USAF. Your old friend Dilbert is leaning on *Approach* Editor Barrie Young, whom Headmouse invited to show that he had no fear of the old superstition about having 13 people at a party.

. . . let's kick around some hairy tales . . .

GRAMPAW P. S. Pettibone took a few puffs on his corncob and sighed contentedly. "Well son," he said, eyeing a respectfully attentive Anymouse, "this was quite a celebration."

Anymouse relaxed a little and squeaked, "I hope you enjoyed it sir."

"Of course I did. Quite unusual—a cheesecake with candles. I must remember that." Gramp chuckled and then squinted reflectively. "It was a bit dry toward the last though. Good thing the refreshments held out."

After a moment of silence Gramp spoke again. "However, I didn't exactly come in here for idle talk. By tarnation boy, it's time we got better acquainted! I'm interested in hearing some more of those 'hairy

tales' of yours and how you've been doing in this rat race . . . Uh, I mean business."

Anymouse wiggled his ears nervously. "Well, sir, I'm afraid you won't think much of my experiences. They include just about all the boners possible and I'm lucky to keep on drawing my flight rations."

"Great balls of fire!" snapped Pettibone. "Don't get modest. For years I've been stuck with characters who have done worse. *You* at least, admit your mistakes. All that these other characters will do," said Gramp with a shrudder "is admit that the world is out of step with them." He shook his head and muttered a word which sounded suspiciously like "Dilberts."

"I sure do believe in admitting my mistakes," said Anymouse. "I think it was you sir, who said, 'profit by the mistakes of others as you won't live to make them all yourself.' "

"Well son," smiled Grampaw, "I may have said it, but I think I got it from an old chief back around the time of the London Disarmament Conference. That was the first Conference you understand.

"But understand this," he said, brushing some tobacco out of his whiskers, "Whoever said it, it's one of the best pieces of advice I've ever heard for people who make their living around these flying machines of ours."

Anymouse nodded in agreement and walked over to a desk stacked with assorted binders, notebooks and loose papers. Opening one of the binders he said, "I think you mean that not only the pilots and aircrewmen can learn through somebody else's experience. For instance, here is a hairly tale . . .

"One early morning an S2F was on a right base and was cleared to land on runway 32. Upon touchdown at about 85 knots a red radio jeep was seen on a converging course traveling up runway 36 toward the intersection of 36-32 (approximately 800 feet from the end of runway 32).

"The red jeep did not change his speed which was estimated at about 40 mph. The pilot locked the wheels and the starboard tire blew and caused a slight swerve to the right at which time the port tire blew and directional control was restored. The jeep passed ahead about 5 feet from the nose . . . the whip antenna of the jeep hit the leading edge of the wing about 3 feet from the tip . . ."

"Stop!" roared Grampaw as he sprang to his feet. "You young whippersnapper. You just wanted to see the P. S. Pettibone temper! Well hang onto your hard hat son, cause we're off. What I think of a driver who would pull a stunt like that on an active field would get us in trouble with the Post Office people!

"This is a case of plain ignorance or sheer stupidity. If ignorance, supervision is at fault. If stupidity, no amount of written or verbal instruction would have kept that driver from getting his head knocked off." Gramps face was flushed and he paced back and forth across the room exuding clouds of smoke.

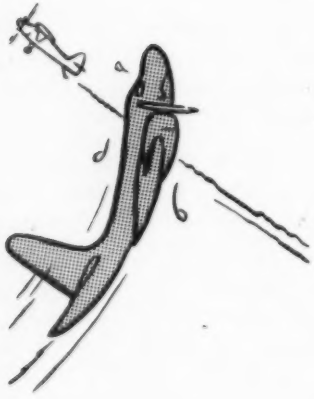
"And further," he shouted, brandishing his pipe like a club in front of a now silent Anymouse, "I'm inclined to pity the supervisors who had to work with such addle-pated, fog-bound, block-headed material!"

"I didn't really mean to get your corn-cob overtempted Gramp, honest," replied Any, "but I did want you to hear what ridiculous extremes of ignorance or stupidity can take place. Of course, some people are neither ignorant nor stupid, some are just plain careless."

"Not in my book son, carelessness is a negative attitude that is generated by overconfidence or by lack of respect for things like a whirling prop that will carve you up if you give it a chance. Carelessness is willful, and anybody who willfully disregards safety comes pretty close to being stupid." Grampaw's pipe flamed out after that bit of wisdom.

"You're right as usual Gramp. Now let me run through a few more Anymouse Reports for you. Here we go . . . 'I was on my . . .'

". . . I just made matters worse . . ."



JC MANEUVER

"I WAS on my fourth fam hop in the FJ-3 and had just completed my high work when my chase plane told me to break off. After doing several aerobatic maneuvers, I decided to descend. At 1500 feet I leveled off and trimmed up. I was doing about 500 knots indicated at about .8 mach which is considered to be a safe airspeed below 10,000 feet.

"The air was turbulent and I was trying to smooth down the plane when it happened. It got out of control due to pilot-induced oscillations and began porpoising violently. Foolishly I tried to stabilize the controls and in doing so, just made matters worse.

"My shoulder harness wasn't too tight, but at least it was locked. My head kept hitting the canopy with each oscillation. Finally I did as the good book said and took my hands off the stick and reduced power to idle, then closed my eyes, for there was nothing else I could do.

"After two or three more oscillations, the plane recovered by itself and I started a very gentle climb-out. My recovery altitude was 300 feet indicated and airspeed about 350 knots.

"It was a very close call and all I can say is, if it hadn't been for my harness and hard-hat I wouldn't be writing this report.

"My recommendations are: Be extremely careful with the *Fury* at low altitudes and high airspeeds; fly with your harness locked and tight, and if you run into these oscillations use the same procedure I used although you don't necessarily have to close your eyes.

"Incidentally, I pulled 5½ positive and 3 negative G during the maneuver."

THIRD MAN THEME

"WE WERE on a leg of the Norfolk range at 3500 feet, VFR but in smoke and haze," said the P2V plane captain. "My PPC was demonstrating a procedure turn to the pilot in the left seat and both the PPC and copilot were looking at the Rafac charts.

"I observed a small civil aircraft climbing dead ahead from below and at a rapid rate. Both pilots looked up for a scan then back to the Rafac charts. I then took hold of the starboard yoke and pulled back and to the left, observing that the other aircraft took no evasive action. A collision was avoided, but I estimate the other plane passed within 20 feet of us still climbing."

LITTLE THINGS DEPT.

"At 40,000 in an F4D, I lit off the afterburner and climbed (somewhat higher). At this point the fire warning light came ON. I secured the AB and retarded the throttle to idle, but the fire warning light did not go out. I then secured the engine.

"During this time I kept close watch for smoke trailing from the rear of the plane but none was observed. The fire warning light finally went out and I continued gliding at between 200-250 knots. At no time did the cabin pressurization go over 35,000 even while the aircraft was . . . (much higher).

"It appeared that the engine, windmilling at 40 to 50% rpm had sufficient turns to keep the cabin pressure up. The RPM did not go below 30% till the plane was below 40,000. I secured the battery in order to save it for an airstart later and did not declare an emergency as I did not feel that one existed at this time.

"At 30,000 feet, airspeed 230 knots, engine rpm 25%, I initiated an airstart. The engine lit off in 10 seconds and accelerated normally to idle rpm. The fire warning light did not come back on. I advanced the throttle to 90% and returned to base for landing.

"While on my way home, I observed that my bailout bottle was not connected to my oxygen mask and my helmet strap was loose. If a fire had happened and I had ejected—!

"In addition to carrying a cockpit

checkoff list, pilots should have a personal equipment and survival gear checkoff list, especially for such high-performance aircraft as the F4D.

"Cause of the fire warning light was faulty grommets holding the fire warning element."

SLICK TRICK

"I WAS making a simulated carrier approach in a HUP-2 when I began to lose engine RPM. I immediately made a correction but the RPM continued to fall. I again added throttle but RPMs still continued to drop.

"I had about 2000 rpm and 15 feet of altitude, both of which were decreasing. As a last attempt I squeezed my hand as tight as possible and added throttle once more. This time it took and I made a safe recovery.

"The aircraft was just out of overhaul and had a stiff throttle. I was not wearing gloves and my hands were very slippery due to perspiration. So, instead of adding throttle my hand was actually just slipping over it."

I say, "Wear your flight gloves. They are a part of your flight equipment and may spare you an accident."

SCRAPE AND GO

"WE WERE on a cross-country in an S2F and about 0900 departed Quonset Point for Milwaukee. Our first stop was Detroit for gas and we made an actual GCA there, refueled and refiled for Milwaukee.

"Milwaukee was expected to remain right at minimums of 400 and one or possibly go lower. Our alternate was Terre Haute. We arrived over Milwalkee after about 2 plus 30 en route, having been on continuous instruments with moderate icing. Milwaukee approach control set up an ASR approach. At the minimum of one mile the copilot advised that he had the runway in sight but it was too far to the left.

"I called and asked for a low visibility visual approach. Clearance was given and we were told to switch to tower frequency. When I waved off I unconsciously picked up the gear.

"My full attention was directed to keeping the field in sight and the copilot was busy trying to switch to tower frequency. Lineup was made with the runway and a landing started. The first indication I had of anything amiss was a scraping sound about the time I should have been touching down.

"Sure enough the gear handle was UP and so I held what I had and applied power. We became airborne and landed on the next approach. We were surprised to see only about three inches gone off the fosdick and nothing else wrong. Upon later inspection at the squadron it was found that my props could only have been an inch off the runway when I applied power."

UNWELCOME STOWAWAY

ON PREFLIGHTING his AD-6 for an early morning launch, Anymouse discovered a ⅜-inch wrench inside the tail at the junction of the rudder and vertical stabilizer.

LOOK OUT BELOW

AFTER giving a routine position report 20 minutes from destination Anymouse experienced complete transmitter failure in an SNB. No expected approach time had been received and the flight was in IFR conditions.

"There was one reporting point between the last reported position and destination," said Anymouse. "This was passed at the reported ETA for that point, but no revised

Anymouse continued next page

". . . only three inches gone . . ."

"It could have spoiled my whole day!"

ETA at destination had been given to ATC. Indicated airspeed had been reduced by ice, despite all efforts to deice with boots and prop anti-icers.

"I commenced holding at destination and at the completion of one circuit, I commenced my approach at my *flight log* ETA. This was nine minutes before my flight plan ETA. Fortunately there was no other traffic, and the descent and landing were uneventful. Nevertheless, my faulty thinking as to which ETA to start my approach on could have been more embarrassing than it was.

"It could have spoiled my whole day!

"P.S. The radio antennae had been carried away by ice."

Gramps, this is one of those situations which cause air controllers to call the ATC Center "Ulcher Gulch." The two-way radio failure section in the Supplementary Flight Information Document has recently been amended and expanded. A review of this plus the dope on sending a revised ETA when estimate is in error in excess of three minutes may prevent your day from being spoiled by a collision!

". . . Things were getting tight . . ."

A TEASPOON OF WATER

"IT WAS a bad day. The weather was 700 and two overcast, tops at 12,000. Two of us *Demons* got an operational clearance and went booming out to joust with GCI. We both had bad radar so I flew formation while my leader flew an impromptu roundrobin.

"We arrived back over the field homer with time to spare before our approach time and found that a TV-2 was lost on climbout so we got a new approach time. It was coming up so the leader started down from 33,000 to hit his new high station time and altitude (20,000 feet). I pulled up so I could save fuel and he broke away.

"In the holding pattern I called again and was cleared for immediate penetration. Well, we penetrate gear down and brakes out in the F3H-2N so I began to get set up.

"I had been going downhill slowly so was now at 22,500 indicated. I crossed the homer and pointed the nose down. The airspeed built up but the altimeter didn't move and the vertical speed indicator was pegged at zero.

"I aborted the penetration, called approach control, and headed back for the homer. Right away I got stingy with my fuel and started a cruise climb. My pitot heat switch was on, no circuit breakers popped and there I was.

"After much time on the radio, approach control found an F4D who volunteered to bring me back but lost a lot of time getting him to altitude. I still didn't have any pressure instruments. We had a hard time rendezvousing since I couldn't give him any sort of position, but we made it and started home. Fuel by this time was my main strain.

"GCA picked us up at 23 miles and 9500 feet—just barely on top and we were on our way. I asked for emergency gear on runway 36R and it was some time before GCA told me there was no gear available on that runway. Three-six left was closed for repair so I called for runway 27 and the gear. This was O.K. but GCA neglected to tell me I would have a survelliance approach (my pressure instruments were back now but I couldn't trust them).

"All these things I knew, but I should have been AOCP for a cool head. Things were getting tight, GCA was shook, the F4D boy was shook and I was ready to eject and had been for some time (500 pounds left).

"I made the mistake of changing my mind again and called for 36R and said I would probably go off the end of the runway. We were way off centerline and GCA tried to turn us back. About this time we broke out at 700 and I was close to zero fuel. I sucked up the gear, called the tower that I was going into 27 on a low visibility approach.

I stayed at the cloud base and fast so I could pull up and eject if the engine quit.

"As I passed abeam the end of the runway I dropped the slats and turned in, still gear up. After I was lined up and still fast I dropped the gear again, then the hook. I tried to hold as much as possible so I could make the runway or at least the overrun.

"I made the runway, my hook grabbed the wire and I two-blocked the chain.

"Damage? I bent the nosewheel.

"Now that I've thought it over I think I should have dumped the cabin pressure and used the cabin altimeter for all it was worth. I shouldn't have waited so long to holler help. Another thing, when you are told to make up your mind and stick with it, there is a reason. From now on I will.

"Just too close, ole' Mousepardner, our aircraft have 15 gallons of 'unusuable' fuel at the bottom of the tank. I used 10 gallons of that.

"All the trouble was caused by a teaspoonful of water in the static lines."

This lad really sliced the old Swiss cheese pretty thin, eh Gramps? He came pretty near to measuring his fuel in teaspoons too!

SUDDEN SHOWER

"BEFORE joining up after takeoff on a night four-plane formation hop, the flight leader decided to cancel the formation work because of poor weather—a 1400-foot overcast. Our F9F-2's took up a trail formation and circled a nearby town to burn down in order to make touch-and-gos.

"After burning down and dumping tips I entered the initial quite close behind the F9F ahead in order to keep him in sight. Just before reaching the break I found it difficult to see the tower. I though at first I had flown into the low overcast since altitude of initial was 1200 feet. I then realized that the plane ahead had just dumped his tips and that my plane was completely covered with JP-4!

"I took evasive action and continued my approach to a normal landing. Just what danger was involved I do not know. The tailpipe temperature remained normal with no increase; RPM showed no change. I would recommend not dumping fuel in the landing pattern, except in an emergency, or anywhere else where a dangerous situation may result."

THE RAZOR'S EDGE

"I WAS flying a pre-briefed photo hop, at an altitude of 10,000 feet in an F2H-2P with my estimated TAS about 350 knots.

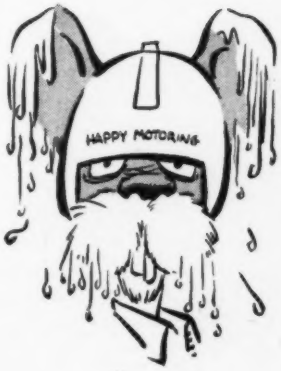
"On the fourth run I had rolled in on heading after scanning thoroughly over my proposed flight line. I was making a quick check of my flight path through the viewfinder when, without warning, the cockpit darkened as would be expected when your wing blocks out the sun, and the plane was buffeted downward.

"The entire incident happened within a fraction of a second and I looked in all directions immediately but did not see any aircraft. Later on in the period several jets made passes and I thought about the earlier incident. My conclusion at that time was that a jet had made a pass and passed close enough to cause the buffeting.

"Upon returning to the squadron, there was a message for any F2H pilot who was in the vicinity of Blank AFB at 1140 to call the station operations officer. The operations officer informed that an AJ pilot had reported a near midair and after contacting the other pilot I learned just how close that photo hop was to being the last one. The other pilot said that he saw me and pulled up and over at the last possible moment.

"This was a head-on situation and I would estimate the other aircraft's

Anymouse continued next page



". . . within a fraction of a second . . ."

TAS about 250. Weather at the time was VFR but both planes were the seagull gray and white. There was a high layer to the north in the direction I was flying and a low overcast to the south.

"My advice is to stay away from the even altitudes when on tactical flights and regardless of altitude, beware of the clear sky with a white background."

". . . I told the plane captain to close them . . ."

LET GEORGE DOOD IT

"ON PREFLIGHT inspection of my F9F-2 I checked the fuel in the main fuselage, telling the plane captain to close them. Then I stuck my head into the plenum chamber making sure the oil, hydraulic and other caps were secure.

"Every thing went as usual or even better because it was a beautiful day and I was really hot to fly. But just as my wingman and I became airborne he told me my fuel tank doors came open. After we joined up the instructor checked them and reported the caps were also open. This put forth a situation that could result in a disaster as the doors to the plenum chamber are open until about 200 knots.

"If the fuel had begun to siphon out it would have gone directly to the chamber and an explosion would have immediately followed.

"This was 100 percent pilot error for not placing the fuel caps on myself and then not making sure they were secure. Once airborne the only thing I could do was dump my tiptank, burn the fuel in my main tank down to 1200 pounds, make my approach at 150 knots and shut the aircraft down just prior to landing.

"I was lucky that nothing happened but the odds were against me. There isn't going to be a similar situation again as I'll handle the securing of all caps; then I'll know."

Like Gramp would say, 'Yer dang right sonny'—often it's too late to be careful after you've once been careless.

WHO DAT?

"WHILE on my fourth night FCLP hop at an outlying field this mouse was following another pilot who desired a very long straight-away. Up to this pass I compensated for the interval while upwind, as my pattern had an extremely short straight-away.

"On this pass I picked up the meatball at the 90 and everything was normal until after rolling out in the groove. A serial number shining brightly off this mouse's right wingtip indicated he was flying a nice parade position on someone and in a cool, calm manner jammed on 59 inches, rolling to the left about 30 degrees (though it seemed like more).

"Slipstream then rolled me to the right the same amount and pushed the nose down. Being at about 95 knots and 150 feet at the time there wasn't too much to do about it. Slipstream seemed to have come to the rescue by lifting the plane clear of my playmate.

"While the blame lays primarily with me in concentrating on the mirror and not being sure of the position of the man ahead, the LSO should particularly at night be aware of the situation that can occur."

Squadron Safety Officer comments:

"I checked with the LSO and found that there was only one man on the runway to observe, work the lights and write in the book. . . . In the groove he attempted to warn the aircraft on the radio but was cut out by other planes in the pattern.

"Steps will be taken to insure two LSO's being on the runway at the same time."

A 10-CENT STRAP

"YOU know that little leather strap in the SNB-5 that holds the control lock down on the deck when it is snapped in place? Well, all the pilots in this outfit had been stepping on it for months and knew

that one end of the strap was gone along with one half of the snap. So what?

"Ordinarily nothing, but on this particular day high winds were predicated for the afternoon with extreme gusts. However, there wasn't any reason why we couldn't get two or three hours in before noon.

"Close to lunch time, we entered the pattern with everything normal. Of course it was rough but still no real problem. The pilot had 2700 hours, the copilot almost 5000. Getting back to that control lock, I know I have spent anywhere from 10 to 20 minutes trying to get the lock in place, the pins in the rudder pedals and the rest of it screwed into the yoke. So has every other SNB pilot at one time or another.

"But guess what happened when we were about 300 yards from the end of the runway at about 50 feet altitude. We hit a terrific gust. I glanced at the pilot, noting the consternation on his face. He was kicking at the rudder pedals and was unable to correct for drift. At the same instant, I saw that red rod up off the deck.

"You wouldn't believe it anyway if I said the pins went in, but if you try it, you'll find the pins can block the rudder if they are simply *behind* the pedals.

"We took a waveoff, the pilot got down under the yoke while I held it straight and got the pins back out. We have a new strap on that lock now."

IN A PICKLE

"IT WAS a sunny day on the Keystone of the Pacific as Anymouse left the briefing tent and jogged anxiously toward his ordnance laden Able Dog. Twelve HVAR'S and two shining tanks of liquid fire hung ready. The provider of young pilots had surely smiled with pleasure on young Anymouse (only 530 hours old in the air).

"Boy! I can hardly wait to pickle those tanks, let's launch!

"The scene shifts (uneasily) to a

Anymouse continued next page

OUR SURVEY SHOWS *

The birds above are telling all.
Some hairy tales or real "close call".
We've put out forms you can submit,
Telling us the whole of "it".
It's hard to survey house to house,
So how about an "ANYMOUSE?"
We'll print your tales for readers all,
In hopes they may prevent a fall.
The results a gain—and ours by far,
'Cause troubles are many in an AAR.
So! Heed this warning, and send in,
Your "ANYMOUSE" and help us win!!

* From MAG 12 Aviation Safety Bulletin

small coral promontory—a designated danger area. Overhead six Able Dogs are in a target orbit, two are just pulling off. We hear, 'Dash three Anymouse in hot, chuckle, chuckle . . . pickle, Now!

"#%&*# no drop! All switches OK. Next run, a steely-eyed Anymouse bore down and pickled. Woosh, oops! A HVAR sailed out beyond the island and skipped along the waves. Anymouse gingerly admired his middle finger that had encircled the stick and pressed the rocket-pickle in unison with his thumb on the bomb-pickle. 'Never do that again' he vowed.

"Round four, run four . . . Last run was a nice drop on that left tank . . . Shift to the right and get that peak of rocks . . . Not too low, want to slap this tank right on the side . . . Pickle Now! Woosh Bang! The air was full of rocks and rocket fragments.

"The scene shifts back to base. A group of pilots and mechanics are examining a monkey-paw sized hole in the right wing of you-know-whose Able Dog. White-mouse, former Anymouse says, 'Yessir, you've got to get the proper thumb on the proper pickle at the proper time. It's those little things that make the big difference."

Sounds like this feller had his dill pickles confused with his gherkins, huh Gramp? Or maybe he was practicing for a pickle-O solo! Like in hamburgers, 'proper pickles produce perfection.'

TAKE A GOOD LOOK

"ABOUT noon two of us filed for return cross-country flight to home base and gave our F9F-6s the normal preflight inspection.

"Turning up at the end of the runway I noticed my wingman had no transmitter but he could understand everything that was said. In great haste to get back we decided that one transmitter was all that was needed, so we lined up and took off.

"Just as soon as I got my flaps up, the cockpit filled with smoke so fast and thick I couldn't see out. My first reaction was to get that canopy open but when I pulled the handle aft, nothing happened and the smoke was still coming in thick and fast. My next reaction was to turn on the auxiliary hydraulic pump but my nav kit was on top of the switch.

"After much frantic grabbing, the pump was engaged and the canopy cracked. The thick smoke was then sucked out and I could see once again. A successful landing was made with a self-induced flameout upon touchdown.

"In the meantime my wingman was wandering around the sky trying to find out just what had happened. He was finally given the green light and he landed, blowing out a bad port tire, and shortly thereafter he too shut down.

"My suggestion is to look in those plenum chamber doors. They are there to suck in air but also aid the pilot in checking those hydraulic lines. Keep the cotton-pickin' navigation kit on the floor where it won't get in the way, and always have two-way communication."

FLASH POINT

KEROSENE in a bucket was being used to clean engine parts in the power plants shop. It was left setting in the open overnight. Next morning cigarette butts were found floating in the kerosene!

LIGHT CONVERSATION

"ON A ROUTINE night proficiency flight in a JD-1, I was scheduled with a copilot not familiar in model. An uneventful round-robin was completed with a standard instrument approach ending the hop.

"On pullup over the field and while preparing for downwind leg

I used a flashlight and indicated to the copilot, with his confirmation, the position of the landing lights and indicated I would signal for them on turn to final.

"As I turned to final I signaled and called 'landing lights' and received a 'roger' in reply. I was aware that the copilot had his hand to the switches but no lights came on. I continued the approach making a satisfactory landing without lights and started to taxi into the line.

"On the way in I attempted to find what was wrong with the landing lights. Between checking my clearance to other aircraft, following a dog-leg in the taxiway and indicating again to the copilot the position of the proper switches, I suddenly bounced off the taxiway.

"I knew that construction was underway (holes 2½ to 3 feet deep connected by ditches) and how far into the boondocks or exactly how I managed to miss all the obstructions, I don't know.

"The lights didn't get turned on until I was safely back on the taxiway. I do know the next time I have to have someone not qualified in the right seat I am going to be more thorough in his checkout. The reason for no lights was the fact that I was being given oil dilution by similar switches located alongside the landing light switches."

SAY AGAIN

"AFTER landing my F9F-8P on runway, where a 15-20-knot wind was blowing pretty much down the runway, I turned off slightly before the end and started crossing the mat back to the line.

"I must have had that feeling that 'the flight is over now' because I locked the single-point ejection system, pulled up the flaps and did a few more like things. Worst of all I relaxed while crossing the mile-long mat area. The idle power drained the battery so that when I called ground control for permission to cross another runway, I accepted a non-intelligible answer for permission to cross. My attitude was that I didn't really need to do that anyway—they couldn't possibly use any other runway because of the wind.

"But thanks to over 4000 hours and instinct and/or training, I did look up and down the runway before crossing and was very startled to see an F9F-8 only a few hundred yards away roaring down my way.

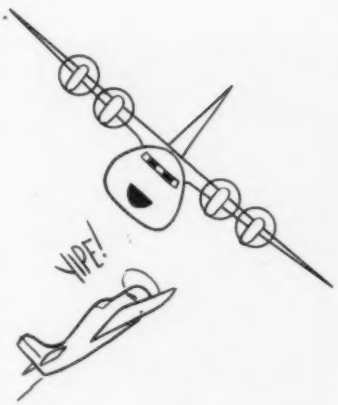
"Fortunately I hadn't started moving and after that I used more power and got a clear permission from ground control to cross. You gotta stay alert in this flying game."

SEE STORY

"VFR with 10 miles plus visibility . . . destination in sight . . . flying AD . . . commenced descent from 5000 on autopilot . . . no other aircraft in view . . . Began item by item checkoff list for landing . . . look-see-and-touch method.

"On completion of the second item I looked up for other aircraft and found a C-130 *Hercules* trying to occupy the same airspace. He was approaching head-on and had started a starboard turn. Estimated clearance was about 200 to 300 feet.

"I had not previously seen this aircraft even though I felt I was keeping an alert lookout. This was off airways flight over sparsely populated area. You have been preaching about this—my error."



BLIND SPOTS

AN FJ-4 was making a practice GCA approach and the pilot was instructed to maintain 600 feet over the field. In the meantime the tower had cleared a JD-1 for normal takeoff.

As the JD-1 got airborne and was crossing the upwind end of the runway, the FJ-4 was waving off and closing on the Juliet Delta. The JD was climbing with the jet maintaining about the same altitude.

Anymouse continued next page

The FJ-4 chase pilot managed after several repeated calls to direct his playmate to turn right. As this was done the vertical separation between the jet and the JD was about 100 feet. Each was in the other's blindspot.

"Visual lookout," said Anymouse, "is obviously the remedy, *plus* proper coordination between agencies controlling aircraft around the same field."

". . . everyone knows but the pilots . . ."

FIXMASTER?

ANYMOUSE was an observer aboard a P5M which was on a shipping and ECM reconnaissance. It was planned as a 4 plus 30 Operational Readiness Inspection hop and in order to ensure shipping contacts, the flight was laid out along the coast, out of sight of land. Here are extracts from Anymouse's unofficial log.

1047—Takoff and climb to 1500 feet (pilot secured APU at 200 feet).

1115—Drift sight was lowered but no drift was taken. No attempt was made to take a deviation check. The 2nd Nav (1 month experience) navigated while the 1st Nav (2 years in squadron) wrote the narrative.

1155—Some ten miles off land, panic reigned at the Nav table. With 1st Nav's assistance we became unlost. The pilot gave the navigator "eye-ball" fixes which Nav agreed with on the ICS but not on the chart.

1210—Radio reported that he had been unable to contact base radio since the "out" report because of traffic. The pilot acknowledged this and nothing more was said.

1230—Still no deviation or drift check since takeoff.

1338—Loran Estimated Position (logged as a fix) showed aircraft to be some 25-30 miles off course and a 15 degree correction was made. Out of curiosity I took a drift; four degrees right. No drift or track as yet appears on the log.

1350—Radar out—PPC not informed.

". . . my old stompin' grounds . . ."

1354—Altered heading, inbound. No drift. No deviation check. No radar.

1358—Radar back in commission with the PPC none the wiser.

1400—Loran fix places the aircraft over 400 miles out. Must be incorrect because it is not plotted. Both navigators noncommittal about ETA.

1413—Position remains indefinite. Policy in the Nav dept. seems to be to just sit tight until we get land on the radar. No sun line. No drift.

1430—No land on the radar. It's a good thing we are looking for North America. Everyone knows we are lost but the pilots.

1445—No land. Nav refuses to use the nav aids available; i.e., sun, drift, radio bearings, etc.

1447—Pilot reports land visually to port. Saved. PPC asked where sun lines put us. Was told for the first time that none had been taken. Asked about drift and was told the same thing.

1450—Pilot informs Nav that the destination range station bears 45 degrees to port.

1452—Island passing to port not identified.

1500—For the past hour both navigators have stared at the radar. Lots of islands. Still lost.

1510—ADC has found us anyway. Pilot reports that we have been intercepted by the Air Force.

1512—Bird-dogging home—no ETA.

Observer's final comment: "Who can get lost on a four-hour nav hop?" Well, now we know.

OLD STOMPING GROUNDS

"OUR hero, Plane Commander Anymouse, was proceeding on an IFR night cross-county in a Super-Connie (WV-2) from an east coast air station to NAS Dallas. Approaching Dallas, Anymouse remarked nonchalantly to his wide-eyed copilots, 'This is my old stomping grounds. We might as well go VFR and shoot straight over to the field.'

"Number one copilot timidly:

'But sir, shouldn't we at least proceed to the range station and take up a heading for the field?'

" 'Nah. That takes too much time. I was GCA officer here for years; I know this country like the back of my hand; we'll just kick her around and make this our downwind.'

"A moment later this Anymouse banked violently to the left to avoid a television antenna and remarked, 'G*%! Some stupid character put up a TV tower right here in the traffic pattern.'

"Copilot uneasily: 'Sir, that runway looks awfully short; are you sure this is—'

" 'Yeah, they all look shorter at night. Hensley is the only field right around here with runway lights. Tell the tower we're turning base.'

"About one mile out on final approach Hensley tower came up and said, 'Navy _____ do not have you in sight. Believe you are making approach to Redbird Field—'.

"Anymouse: 'Gear up—METO power, etc . . ."

"Old stompin grounds my gosport tube! By tarnation, looky there Any, do you see what's going on while you're reading me those reports? There's a young whippersnapper got a JP-4 truck parked in front of my N3N, and if my tri-focals don't deceive me he's getting ready to pump my yellow bird full of that jet juice! Sorry to rush out on you in such a temper Any, but I'm gonna hustle out there and see how far that young scamp goes before he catches on to what he's doing.
"That's okay Gramp, thanks for coming to my party—'bye and good luck. Let's see now, before I forget it— ' "There I was, sitting in my office, when out on the ramp a JP-4 truck—' "

UNDER PRESSURE

THIS outstanding sequence of ditching photos show the impressive speed with which the helicopter plucked the pilot from his sinking perch and returned him to the carrier 2 minutes and 45 seconds after a partial cat shot had caused the F9F-8P to plop into the water.

Now, about that cat shot. Seems the picture went something like this:

The Catapault Officer gave the signal (fingers extended) for 160 pounds of steam pressure for the shot. The Deck Edge Operator, somewhat new to the business, acknowledged with a signaled reply of *150 pounds*. The Cat Officer signaled a "negat" to this and repeated his signal for 160 pounds. The DEO still read the signal as 150 pounds, but replied with a signal identical to the Cat Officer's. The DEO then relayed, via sound powered phone, the 150-pound order to the Console Operator, who asked for a recheck with the Cat Officer. The DEO then called the Cat Off. over and asked "was that five zero or six zero"; the Cat Officer assuming the "one hundred" portion of the number was understood, with only the five zero—six zero digits remaining in doubt, replied "six zero."

The DEO passed this on to the Console Operator, saying it was "six zero pounds." The Console Operator once more questioned the DEO if he were sure it was six zero pounds. The DEO said, "yes—six zero . . ."

So-o-o-o, you guessed it, the Console Operator blew down to exactly *six zero* pounds of pressure and signaled "ready" . . .

A moment later a puzzled jaygee found himself just off the bow with a round hundred knots indicated, low and settling. Approaching the water and unable to gain sufficient speed, the pilot rotated the F9F to hit, wings level, gear and flaps down, about 400 feet ahead of the ship. The pilot received only a minor foot injury from having one foot off the rudder pedal.

Recommendations, (other than one or two pungent suggestions which may have been made by the pilot) which resulted from the investigation included:

". . . Catapult Officers brief the Deck-Edge and Console Operators on types of aircraft, their expected weights . . . conditions . . . pressures prior to every launch.

". . . method for relaying requested steam pressure from Deck Edge Operator to Console Operator be changed to one similar to that used for indicating desired RPMs on ship's engine order telegraph.

". . . a steam pressure gage, indicating pressure actually introduced into the system for the cat shot, be installed flush with the flight deck at the cat officer's position . . ."

. . . A puzzled pilot found himself just off the bow with a round hundred knots indicated, low and settling. The helicopter pickup was quick and efficient . . .

PULL UP, JOHN!

WEATHER at the master jet base Monday afternoon was ceiling unlimited with 12 miles visibility in all quadrants. The aircontrolman at the local control position eyed two sweptwing jets in position for a section takeoff at the end of runway 27 and keyed his mike. "Zulu one; surface winds west at ten—Remain below 500 feet until one and a half miles from the field. Cleared for takeoff."

As the two jets on the runway began rolling, a jet flight leader approaching the field called the tower. His voice added to the near-constant squawk of loudspeakers typical of busy towers in a high-density area. But, aircontrolmen seemed to magically unravel the confusing babble and the tower controller answered immediately, "Alfa four, go ahead."

"This is Alfa four. I'm five miles north with two; at 1500 feet, for landing." The tower rogered, gave field information and instructed the flight leader to "Check left break for runway 27."

By the time Zulu flight was airborne, Alfa flight was four miles northwest of the field moving south southwest. The problem now becomes one of time and space and it moves almost as fast as you can read.

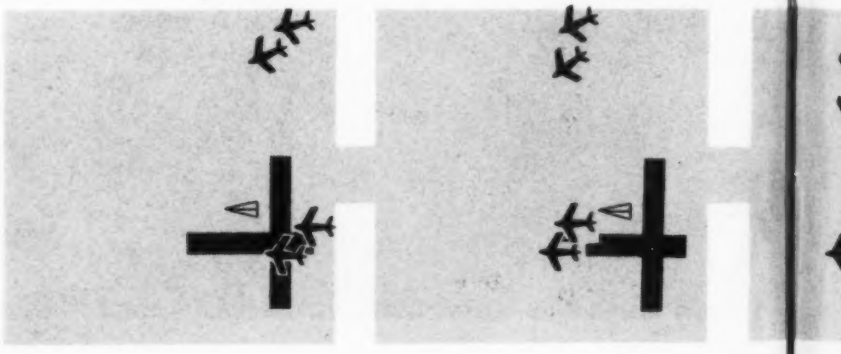
Following takeoff, immediately after cleaning up the aircraft Zulu flight leader gave his wingman a visual signal to change to a pre-briefed tactical channel. The two jets headed straight out from the runway, accelerating.

Alfa flight is now three miles northwest of the field and for convenience, the flight leader requests clearance to enter on downwind leg for runway 27 instead of making an overhead approach to the break.

Traffic permitting, clearance was given to enter downwind and Alfa flight leader was advised of a single aircraft then at the 180 spot. No information was passed about Zulu flight. As Zulu flight had already switched from tower frequency they were not alerted by the conversations.

Up to this point Alfa leader had held his 1500 feet but now he began letting down and turned to about 180 degrees. Simultaneously he gave his wingman visual instruction to step back for a landing interval.

Zulu flight had been accelerating and was in a slight climb at about 240 knots. Alfa flight was descending at about 250 knots and prior to lowering speed-



brakes and placing his plane in the landing configuration, the leader looked to the right momentarily to check his wingman's position. The exact altitude is unknown but was estimated at 1000 feet.

At an altitude estimated by Zulu leader to be from 800 to 1000 feet, he saw two aircraft on his starboard beam, level, approaching on a collision course and his immediate reaction was a wrenching pullup followed by a right turn.

At the same instant the Alfa wingman saw Zulu section and transmitted, "Pull up, John!"

Zulu leader passed just over Alfa leader and the Zulu wingman, attempting to follow his leader's maneuver was hit by Alfa leader. The collision was 2-½ miles from the end of runway 27.

Fortunately the only injury was of a minor nature to one pilot's hand. This pilot ejected successfully while the other landed his plane after checking the slow flight characteristics at altitude. The pilot who ejected commenced ejection procedures immediately after he realized a mid-air had happened and that his aircraft had suffered severe damage. "It is problematical," said the board, "whether his ejection would have been successful had he not been flying an aircraft with single-point ejection" (one of three at this base at that time). The ejection seat, automatic-lap-disconnect and parachute functioned properly. The chute opened at an altitude of approximately 200 feet.

The accident board was of the belief that the series of events leading up to the accident began with an authorized deviation from the normal traffic rules established for the field. The Air Operations Manual requires all flights of aircraft, other than single aircraft, to enter the traffic pattern over a prescribed point nine miles from the field. Alfa flight was en route to this point when the flight leader obtained clearance to enter downwind.

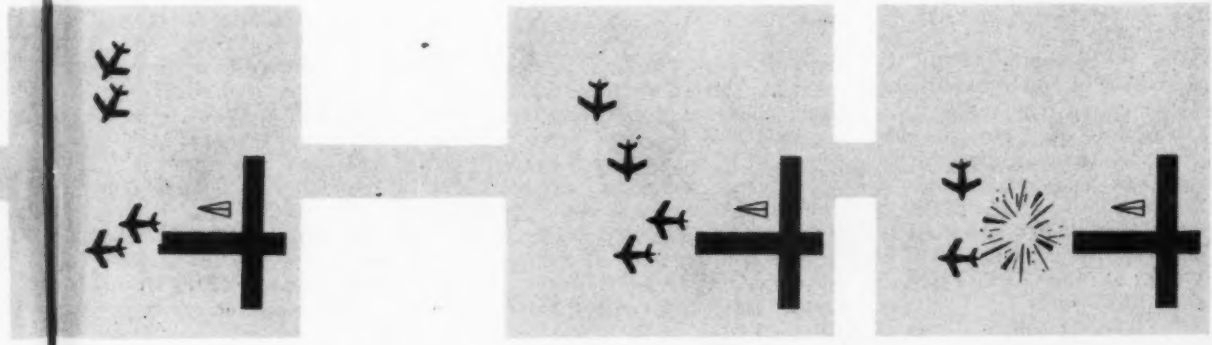
It was the board's opinion that the tower controller erred in judgment in clearing Alfa section to enter downwind which would cause their descending course to cross Zulu's ascending course. Having given the above clearance the control tower failed to issue a warning to either of the flights of the other's presence.

The skipper of one of the squadrons involved mentioned that "during and immediately following takeoff, and in preparation for landings, pilot's lookout doctrine, while never to be neglected or relegated to a secondary factor, is most apt to be compromised by attention to other details. In this transition period a considerable share of proper traffic separation in or near the traffic control zone rests with the control tower. Positive control of authorized deviations from prescribed traffic patterns must be exercised by the tower personnel." However painful that statement may be to controllers, note that the last sentence says "authorized deviations from prescribed traffic patterns."

Recommendations by the board included the opinions that tower personnel be instructed *not* to authorize any deviation from established traffic rules except in emergencies and that all pilots be briefed on the importance of adhering to established rules and not to request deviation except in emergency. This recommendation was, in general, endorsed by the entire chain of command.

Air traffic course rules were formulated by a board composed of air group commanders, squadron commanders and station personnel. The Commander, Fleet Air Detachment, has established an Air Traffic Board composed of all group commanders to review and make recommendations that will assist in solving traffic problems. This is to be a continuing board, meeting monthly.

Squadron doctrine for one unit, as a result of this accident, was modified to require 5000 feet and 10 miles radius from the field during VFR weather for changing channels to squadron common.



Truth and Consequences

A DIGEST OF SIGNIFICANT AIRCRAFT ACCIDENTS

MR. NO KNOW—It was dark when the young AD-6 pilot reported over Nashville en route to a military field somewhat to the northwest. He was at 9000 feet on an IFR flight plan with the weather VFR (12,000 broken with 10 miles visibility).

Nashville radio asked if Omni gear was aboard and when the pilot said no, he was informed that the ADF approach for the military field was not authorized even though it was still listed as effective in the current handbook. With weather VFR the pilot canceled IFR and continued VFR.

NOTAMs had been checked prior to departure from home base and none were found for his destination. Of interest is this statement in the accident report which explains why no notice on the ADF approach plate was found:

"The pilot was uninformed on the procedure whereby the NOTAMs for Air Force Bases are not normally filed at Naval Air Stations. Flight Service must be contacted for NOTAMs for Air Force Bases."

No attempt was made to continue on his scheduled flight plan on airways and a turn inbound to the destination radio beacon was the primary means of orientation. The pilot called for a DF steer and was told it was out of commission. He then requested a radar controlled approach and was informed it was secured for the day. There was no attempt to use the ARA-25 (UHF-DF) in the aircraft.

By this time the lights of an airfield had come into sight. The pilot reported this and was cleared for a landing. The destination runway was oriented northeast-southwest and nothing seemed out of order as the pilot flew his pattern and lined up on a final heading of southwest. He touched down long and then saw he would be unable to stop on the runway nor was there sufficient runway left for a waveoff. He cut the switches and tried to groundloop but went off the end of the runway over a 15-foot embankment onto a railroad track.

To the pilot's surprise, the people who came to the crash scene wore civilian clothes—no military uniforms at all.

In answer to the cry of "Where am I?" he was told he had landed at a civil field 4½ miles southeast of the military field. Its lighted runway also lies northeast-southwest but is only 4100 feet long compared to the 11,000-foot military field. No tower was in operation at the civilian field. However, the runway lights were on because of earlier requests by civilian aircraft using the field.

The civil field does not appear on the letdown plates for the military field or in the radio facility charts. The sectional chart of the area, which shows both fields, was available but not used. The pilot stated he did not know there was another field in the area.

. . . the pilot found he had landed at the wrong airport . . .

DEFERRED—"I took off at 1328 in an F9F and made a normal 100% climbout to 20,000 feet, performed turns, then continued my climb to 28,000 feet, repeated the turns and further climbed to 35,000 feet where I leveled off, reduced power to 92% and again practiced turns.

"In a level flight attitude, 92% rpm with moderately rough air, I experienced a sudden vibration accompanied by a high pitched squeal. My TPT pegged and the overheat light flashed ON. I reduced power to idle and made a starboard turn to check for fire. None was evident."

The pilot's trouble came from a broken portion of a turbine blade which damaged the engine and then passed through the engine tail cone and fuselage. He was over water until the final portion of his flight.

"My turn headed me toward (base) and I slowed to 180 knots while checking control of the aircraft. I had good control but

". . . though the weather was low, clouds and scattered rainshowers, I decided to continue to base . . ."

vibration and high squeal were present. I continued toward (base) giving the tower a call. I asked for the weather and permission to make a flameout approach. The tower informed me that FCLPs were in progress and no flameout approaches were allowed. No weather was given.

"I then declared a *deferred emergency*. The tower asked for a repeat of the transmission which I gave twice more upon request, then gave my position . . . and estimated base in 10 minutes.

"There was a group of F2Hs in the FCLP pattern and they talked over their approaches for a minute. I stayed on their channel, so I could hear what they were doing. Channel 1 was being used by a VIP flight. The tower then told me to go to (an alternate field). From 16 miles and 14,000 feet I had (the home field) in sight and though the weather was low, clouds and scattered rain showers, I decided to continue for (the base).

"The tower had not given me this weather, I had deduced it from what I could see. I called the tower and told them I was continuing for their station. I had made practice flameout approaches where I had to duck under clouds and use speed instead of altitude before, and felt that I was capable, especially with the fact I still had power available if needed.

"I pushed over to head for the 180-degree position to start trading some of my excess altitude for speed. The vibration from my engine became so intense I thought it might tear itself apart so I shut down.

"My position was then five miles at 8000 feet. I informed the tower of this and they in turn told the LSO who sent the FCLP aircraft into clear areas away from (the duty runway).

"I elected not to squawk 'mayday' nor tell the tower of my dead engine at this point because I felt it was not necessary due to

Please turn page

PASS IT ALONG

Does your plane captain see *Approach* regularly? Spot checks indicate that pilots in many squadrons see every issue, but mechs do not! Because *Approach* contents are selected with the safety needs of all naval aviation personnel in mind, please help see that the line shack and maintenance shops receive their share—they just might read something that will help *you*.

Truth and Consequences

Continued

my proximity to the station. I continued pushing over to get under the weather which was worse than I had estimated. I had to go through a couple of small clouds and was at the 180 at 300 knots and an estimated 1000 feet.

"I opened the canopy. The tower had cleared me twice. Just prior to the 90-degree position I turned on my emergency hydraulic pump and extended my gear. I called 'three in the green' at the 45-degree position and lowered my flaps. Waiting a few seconds I dropped my speedbrake. I was hot over the end of the runway at 15 feet and 170 knots but spiked it on the deck just prior to the 2000-foot markers. I lifted my flaps quickly and hit the brakes.

"I stopped short of the runway end by 2000 feet, secured the rest of the cockpit, climbed out and inspected the damage."

This flameout happened before the OpNav instruction came out dealing with ejection from jet aircraft in such situations but we agree with one of the endorsers of the accident report that the "pilot's handling of this emergency was considered to have been excellent." However; a recommendation was made to declare an emergency (and a first class one too) when making an approach under similar conditions as well as to keep the tower informed.—Ed.

ABANDON SHIP—At 17,000 feet an FJ-2 wingman experienced a complete electrical failure and he attempted to attract his leader's attention by adding 100 percent power and catching up with him. As he was exactly abeam of the leader's wing, the wingman's engine flamed out.

"As I dropped back," he said, "I continued to watch the leader, hoping he would see me. I pulled the throttle around the horn, shut off fuel and switched to BATT position to inform my leader of the situation. However, I had no radio at this time and I was trying to trim the aircraft but the trim switch had no effect. I switched to emergency IFF and thought the situation over . . . and determined that I had best eject (at the time there was a solid deck of clouds at 5000 feet).

"I came to this conclusion at 15,000 feet and after mentally reviewing the procedure, I checked my airspeed. I was indicating 240 knots so I pulled back on the stick to slow to 200. By this time I was holding quite a bit of back pressure. I checked my airspeed at 200 and reached up with my left hand and pulled the face curtain down and watched the canopy leave the aircraft.

"I continued the pull and released the stick and felt the charge explode. I was spinning quite a bit so I spread my arms to stop the rotation. My outstreched arms had no effect and I remembered I was still in the seat. I unfastened my lap belt and kicked the seat. It separated from my feet but seemed to pivot around my head and stay against my helmet. I felt around the back of my head and discovered the headset cord pulled taut. I gave it a hard pull and it snapped and the seat separated.

"I looked down and found the D-ring and pulled it, and the parachute opened. I descended through the overcast and made an uneventful landing . . . I have 591 hours flight time of which 16.6 hours have been in the FJ-2."

DISTRESS QUIZ

① What are the voice calls used for varying degrees of distress?

② When lost and without a receiver or transmitter you alert the Air Defense Command radar system with turns in which direction?

③ If in a jet how many minutes would you fly each leg of the triangular distress pattern?

④ What degree turns are used to make distress patterns and what needle-width turns are made?

Answers on page 40.

Good grief man! don't you know about broken mirrors?

WHEELS-UP SAVES

The Big PAYOFF

Box score on major wheels-up landing accidents (pilot-caused)

1 Jan.—1 Aug. 1956	34
1 Jan.—1 Aug. 1957	17

S/SGT S. L. STULCE, SOES, MCAS Cherry Point FJ-3
FOR HIS 17-th WHEELS-UP SAVE, SGT STULCE FIRED VERY PISTOLS THAT PREVENTED THE PILOT OF THE FJ FROM MAKING A WHEELS-UP LANDING.

1st LT G. E. ALLEN, VMF-312, and
SGT G. H. PETERS, SOES, MCAS Cherry Point FJ-3
SGT PETERS noticed the FJ on base leg with no gear; he informed LT ALLEN who gave the aircraft a wave-off via radio.

COOPER, M., AN VU-7 JD-1
The JD was on final with the landing gear not extended when COOPER fired remote flare pistols; the pilot immediately added power and departed the pattern.

HIGGINS, J. B., AC3 NAAS Kingsville TV-2
The main gear was retracted and the nose wheel was only partially extended when HIGGINS warned the pilot, by radio, to take a wave-off.

LITTLE, E. W., NAS Norfolk F2H
The starboard main mount was still retracted although the other two wheels were down: LITTLE fired flares and prevented an accident.

MAYER, G. E., AN VU-7 F6F
During FCLP, MAYER fired remote flares which prevented a wheels-up landing by the pilot of an F6F.

SNOOK, E. S., AC2 NAS Cecil Field AD-6
On his initial FCLP pass, the pilot of the AD reported gear down. SNOOK observed the gear to be still up and advised the pilot, who continued his wheeless approach. Alerted by SNOOK'S radio transmissions, the LSO and Runway Duty Officer waved the plane off using Very Pistols.

2nd LT L. T. NIELSEN VMF-114, and
SGT J. R. SPLAWN, SOES, MCAS Cherry Point FJ-3
SGT SPLAWN observed the FJ making a wheels-up approach and fired flares; LT NIELSEN Transmitted the word "Wheels" three times over the radio; the pilot took a wave-off.

HALF SAFE!

A July 1957 dispatch concerning a wheels-up landing and the Runway Wheel Watch is quoted for information: "STATUS WHEEL WATCH SECURED DUE TO ONLY TWO AIRCRAFT AIRBORNE AND LSO RESPONSIBLE FOR GEAR CHECK OF FCLP AIRCRAFT"
Only two airplanes airborne, but ONE of them landed WHEELS-UP!

headmouse

Have you a question concerning safety

? ? ? ? ? ?

Send it in to Headmouse, NASC, NAS Norfolk, 11, Va. on an Anymouse Report and he'll do his best to help

Dear Headmouse,

DON'T you have a checkoff list?

In your October 1956 column in *Approach* you distinctly said you would answer the letters published in that issue in a "forthcoming issue."

Consequently, each month I have awaited the arrival of *Approach* with eager anticipation to see what sort of a story you would dream up. So far, through the April 1957 edition, I have not seen any reply. I have a sneaking hunch you are being quiet as a mouse about this. Is it because you are reluctant to give us some ungarbled word on this sad situation (personal equipment) or do you plan to wait until BuAer gets their head out and procures some decent gear?

If this is the case I will stop looking for your answer because I only need 20 more years to go out on 30 and after that I will probably lose interest.

However, I hope you don't abandon the program of answering the gripes published in the October 1956 issue because my two year old will no doubt be interested in the latest developments in personal flight gear as he treks to operations to file his interplanetary round-robin nattily attired in his baggy (check the label to see if it's flameproof) summer flight suit, sweaty nylon overall type G-suit, and hardware store Mae West, all the while wondering if his earphones in his "new" H-5 helmet have failed completely.

Dear Headmouse,

IN THE October 1956 issue of your wonderful magazine you assured all ever-lovin' aviators that you would present a point-by-point discussion of a series *of letters written to you on the subject of pilot's equipment*. Many persons believed that some IMMEDIATE forthcoming issue would contain a lovely description of what's in store for us fashionwise.

Well, now Mr. Headmouse, this statement of yours appeared SIX months ago and as yet we have seen no details on this subject which you were going to discuss at great length—or at least that's what we were led to believe.

True, the new APH-5 has come to the pilot's wardrobe, but certainly you have something else in store for us ? ? ? Perphaps a parachute that works more consistently than those in present use, or at least fits better in the present-day mach 1.5+ jet aircraft. Or an oxygen mask that isn't modeled after the WW2 type that is still in high usage today. Or perhaps you just plain DON'T HAVE A SINGLE SOLITARY BIT OF GOOD NEWS FOR US AT ALL ! ! ! ! ! ! No doubt your good intentions are just snowed under with the usual administrative paperwork that all higher echelons demand of the real working classes.

Well, it's time to see my insurance agent about doubling up on my aviation coverage policy, so I'll have to close for now.

Yours for progress at all costs (except the pilots)

ANYMOUSE
("the needler," and you'll hear from me often)

Dear Headmouse:

THESE two items are bothering us: This squadron was one of the lucky ones. Last fall, all pilots were issued their new integrated H-5 helmets. They work fine and all hands were properly appreciative. Now, we're having troubles.

The ear-cups on some helmets have begun a gradual disintegration, depositing small black particles on the pilot's sideburns and behind his ears. A good, warm deployment at Gitmo made most of the inner pads ripe and unwholesome. Two pilots have succeeded in breaking the visor. One pilot suffered a rivet failure which caused the tabs to which the oxygen mask is fastened to pull loose. Another has a cracked and inoperative visor adjusting knob.

None of these malfunctions and breakdowns is completely unexpected, but the reaction from the flight gear issue pool is. "No spare parts, no spare pads, no spare visors." Then, if the pilot decides to throw economy to the winds, no new helmets either.

In other words, if you break it, you've had it, for a year or so, they tell us. Surely the Navy didn't buy all those new helmets without buying extra visors, liner pads and other small hardware. Or did they? *(I'm afraid they did, sir—Ed.)*

One other item that has cost a lot of flights. The standard little oxygen mask microphone seems to have a useful life of about three months. This item has always been one that is personal issue to the pilot.

Brief your flight, preflight the airplane, strap in and start up, then you discover your transmitter doesn't transmit. Changing this microphone is about a three-minute job, but getting one means back to the readyroom, get in uniform, pick

up log book from operations, have old mike removed, over to the flight gear pool, draw new mike *in person* (pilot must sign the chit), back to the squadron for installation, return log book . . . Takes about half a day.

Some units, including a manufacturer besieged by ferry pilots with defective material, have installed ready or locker room testers—Ed.

Why doesn't each squadron have a half dozen of these little jobs in their neat sealed tin cans?

We don't have to draw radio tubes on an individual basis if a pilot's UHF doesn't work, so why this one item? Spare oxygen masks for quick replacement are not the answer: an oxygen mask is a little too much like a toothbrush to swap them around, also the proper fit is pretty important. Besides, oxygen masks are personal issue too.

XO, VA

Dear Headmouse:

THIS squadron has recently received the new APH-5 helmet and many if the pilots have the following conclusion concerning it:

All the money, time and effort that were expended in the development of the thing might as well have been tossed down the drain. The end result has turned out to be a worthless piece of junk.

A few of its novel features are:

(1) A chinstrap that won't hold the thing on if you shiuld receive a severe shock such as the landing of a mosquito on your head. (*See August issue—Ed.*)

(2) A visor that will not protect your eyes from any sort of blow and which allows dust, dirt, metal particles and all other debris to blow up under it.

(3) An ear phone arrangement that allows you two choices: (a) hear nothing or (b) wear it so tight that a headache results in approximately five seconds.

(4) A visor cover which protrudes enough to insure that the helmet will be blown off upon ejection or bailout.

(5) A fitting arrangement which allows almost everyone to have a helmet too small or too large but which makes it almost impossible to get one that fits well.

(6) An excellent suction cup arrangement fitted over the ears in such an ingenious way that a sharp blow from the side will rupture both eardrums.

I have outlined but a few of the helmet's outstanding features and will now try to predict your answer. It should go something like this: "Sure, it's not perfect, but it's better than the old ones." That statement is open to discussion, but let us say for the present that it is true. In the same light, an F6F is better than a Spad, but will it stand up to the F8U?

Enough discussion, let us now ask a question.

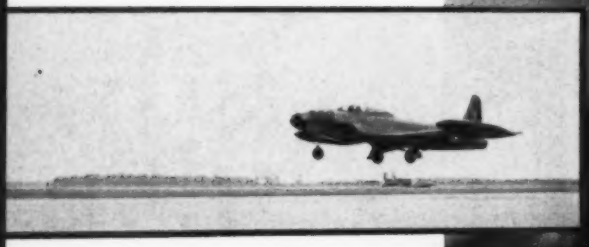
Why not adopt the Air Force hardhat? Even your article in *Approach* listed no major discrepancies inherent in that piece of equipment, and in all fairness, even at the risk of making some people jealous, you must admit that it is far superior to the APH-5.

Several of this squadron's pilots have managed to cumshaw said AF helmets and are greatly envied. The rest of us are now trying to think of ways to get them. Although we know they won't trade them for ours (who would trade a Cadillac for a Ford?), we may be able to talk them into swapping a few so that they can use ours for prime examples of how not to build a hardhat.

ANYMOUSE

Sorry, but in the press of other matters we've neglected following up on our promise to answer these and other equipment questions. However, a copy (less name) of every gripe has religiously been going to the labs concerned! Some of your questions will be answered next month. In the meantime, please continue to needle us!—Ed.

I feel a draft.



THE LONG AND SHORT OF TV-KNEES

Perturbed pilot to flight surgeon: "Why isn't something done about the dangerous situation in the TV-2? I mean the ejection seat that knocks off the kneecap or foot every time anybody has to eject.

F.S. "Wait a minute, we've had *no* amputations! and only a few cases of broken legs from ejection. These were not all in TV's and were due to incorrect prepositioning.

"All those cases you know of—I haven't heard of them. When, where, and to whom did they happen?"

P.P. "Well, I don't know any exactly, but it's a well-known fact that it always happens. The knees or feet hit the canopy edge. It happens, Doc."

F.S. "Well, I'll sure look into it. I wonder why I haven't heard about them?

Two days later, flight surgeon to same perturbed pilot, "Here are the results of my inquiries about those broken or lost kneecaps and feet you asked about the other day. You can see for yourself that it's just a false rumor."

P.P. "H-m-m-m, that sure is funny. Everybody says it happens all the time.

F.S. "I think you should do everything you can to spread the

truth. Any pilot who believes the rumor that he's faced with the probability of leg injuries is likely to hesitate before using his ejection seat in an emergency. This delay might well cost him his life."

P.P. "Yep! You're right. It might at that."

* * *

The records and the facts should convince all doubting pilots: the possibility of a pilot's knees or feet striking the cockpit canopy edge are extremely remote!

Ejection records on all ejections in all type aircraft show the most serious injuries to lower limbs to be fractured ankles and upper legs. One fractured ankle resulted from the foot being lifted off the foot stirrup prior to ejection, and the pressure imposed by the leg's inertia coupled with sudden impact from the foot stirrups upon ejection culminated in a broken ankle.

Another pilot reported that his feet were on the rudder pedals at the time of ejection, during an outside loop maneuver. Injuries incurred were abrasions and bruises of the *back* of the knees from striking the *seat edge*.

All of a dozen or so bruised or fractured legs when the pilot went through canopy show: "not positioned," "feet not in stirrups."

Squelching Rumors

It is believed that the foot/knee injury gossip can be exploded this way:

As long as the average person is sitting in an ejection seat, even in a moderately slouched position, his knees do not extend beyond the clearance required for the seat itself. And, since the knee works like a hinge, the feet will be pulled from an outward position close to the seat by the forces applied on ejecting.

The best "show me" exhibition is done with a rock-back swivel chair. Have the non-believer sit in it, and straighten his legs. Tilt him back swiftly in the chair. His legs will bend at the knees and his feet will hit the floor. The forces on ejection are much greater and his feet will be sucked in close to the seat.

In a TV-2, since it is most misaligned, get a ruler and show all disturbed pilots the distance from the seat mounting rails to the point their knees extend when using a seat-type parachute. Slide the ruler on up the rails to where it hits the windshield.

Then show the difference in inches they have clear.

On one recorded TV-2 ejection, the pilot was leaning forward examining the right arm rest when the seat fired, and he was ejected through the canopy. The most severe injury was a vertebrae compression fracture due to poor positioning at the time of ejection.

The clearances offered in the TV-2 ejection seat are sufficient for adequate clearance even for tall men, when using a QFS (seat type) chute authorized by BuAer dispatch 071536Z of Feb 1957.

A white line (TV ASC-101) gives the pilot a ready indication of clearance if a back parachute is used. If the forward pilot's seated thigh length does not exceed 23 inches, the type of parachute to be used is optional.

However, if the pilot's seated thigh length exceeds 23 inches, the pilot must be fitted with a seat type parachute in order to assure proper knee clearance upon ejection. The use of seat type parachutes will provide safe ejection clearances for pilots with seated thigh lengths up to and including 28 inches.

Use of the seat type chute does require caution in installing and removing it from the aircraft because an extremely hazardous condition exists in which inadvertent actuation of the ejection seat may occur.

The cockpit white limit line should be observed in all cases to determine the need for use of the seat pack. ●

Notes from your flight surgeon

VISION TRANSITION

The increase in stage lengths of air carrier flight has introduced a new problem to pilots, namely, rough landings. Conversely at the end of short-haul trips pilots almost always make very good landings. Why?

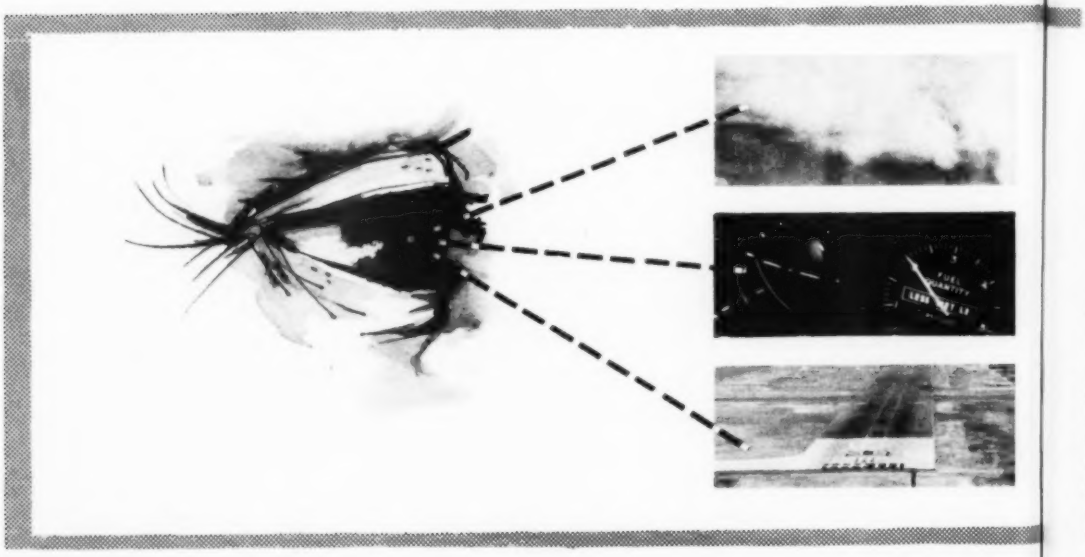
The problem seems to lie in the eyes' indisposition to accurate distance and depth perception after relatively long periods of flying at high altitudes. There being nothing outside the cockpit for the pilot's eyes to focus on, his focal distance becomes established at a mere three and a half feet. Therefore, at the end of the trip, when the pilot comes in for his landing, this induced muscular lethargy of the eyes produces inaccurate distance and depth perception. The result: a landing you can't brag about.

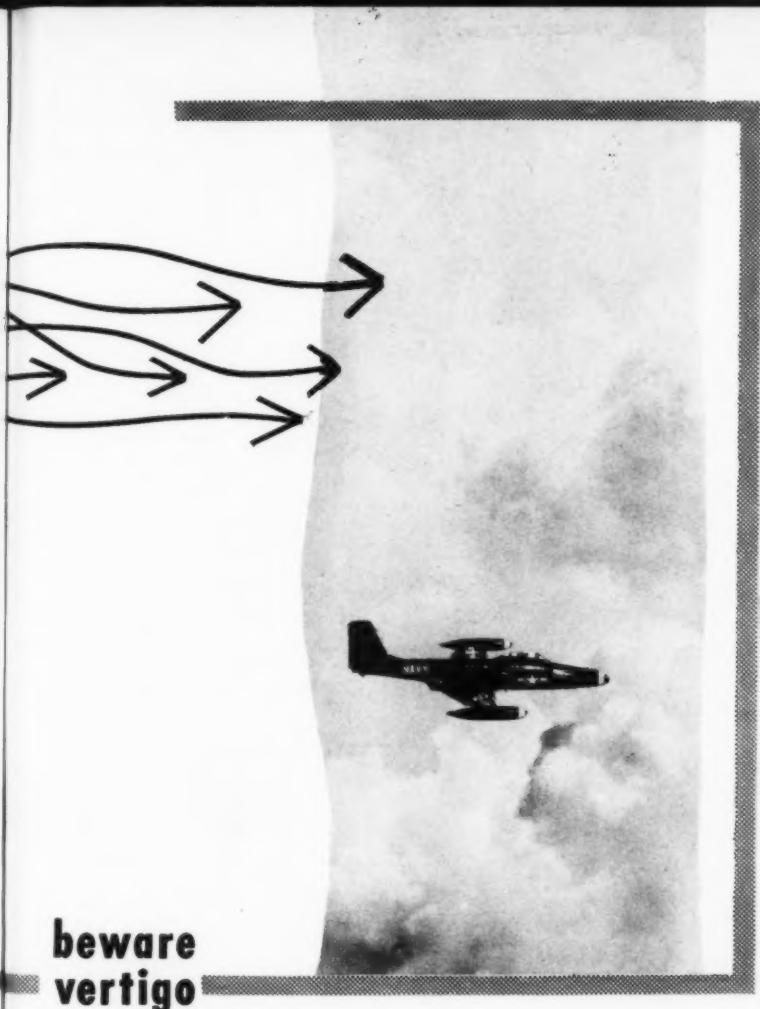
On short-stage flights where altitudes are relatively low and frequent landings are made, the pilot's eyes are constantly exercised by focusing on objects first inside then outside the cockpit. The result: good landings, smooth as a . . . well, really smooth and gentle.

Pilots flying the high-up and fairly long trips recommend the following as a solution to the problem:

On your letdown to the airport and beginning at an altitude of about 1000 feet, give your eyes some tune-up by looking back and forth from the instruments inside the cockpit to the horizon as well as to objects on the ground. (*Aero Medics, who also recommend more visual training for pilots say that 10 minutes of this is ideal—Ed.*) Then by the time you come in over the threshold, your eyes will have "limbered up" to give you instant and accurate depth and distance perception. The result: continued good landings.

Try it, if you've made some rough landings lately. — *Excerpts from CAA Air Safety Digest No. 6, 6/56*





beware vertigo

On a routine cross-country training flight pilot noticed fuel deficit. He carried out routine emergency radio procedures, however, due to radio malfunction, he was unable to follow various steers, and was unable to transmit.

"During the right penetration turn I noticed that the G-2 compass was frozen. I continued my scan and picked up 30 degrees of bank on the attitude gyro. I was confused by the needle-ball which indicated that my wings were straight and level. For a moment I felt that in reality I was straight and level but I couldn't get the gyro out of my mind and decided to level the wings according to the gyro horizon.

"At about the time I had 15 degrees of right bank on the gyro horizon, the needle-ball indicated a full standard-rate turn to the left. I developed severe vertigo because the element of doubt entered my mind and I was then unsure of almost every movement. I then leveled my wings according to the needle-ball and shook my head to get rid of the feeling I was in a turn. I began flying on needle-ball, airspeed and altimeter, and often had to fight the urge to believe the sensations I had.

"Going contact brought a feeling of relief."

The lack of fuel led to a flame-out, followed by a successful ejection and chute landing with only very minor injuries.

THOUGHT FOR TODAY

To LOOK is one thing. To SEE what you look at is another. To UNDERSTAND what you see is a third. To LEARN from what you understand is still something else. But to ACT on what you learn is all that really matters, isn't it?—*Flight Safety Foundation 57–6*

THAT FIRST TOUR ITCH

So you've gotta skin rash. Hot weather, many hours strapped to the warm seat, dirty flight suit and no spare to allow for a cleaning—yea, from a multiplicity of causes you've got that old feeling, an itching, burning, squirming rash.

The aircraft wanders about the wild blue yonder while you use your fingernails to rake your wild red hide, and maybe you don't sleep so well at night. Nevertheless, you decide for yourself that it's more uncomfortable than serious. So ya go to Ye Cornere Pharmacye and buy a collection of salves and powders.

But they don't work so fast. They don't help at all. In fact, the whole condition gets worse.

What pilots don't know is that one or several of the remedies usually bought cause an allergic reaction from the already irritated skin. Just how serious the condition is depends on just how long one waits to go to his flight surgeon, where he should have gone in the first place. Though the flight surgeon is busy, he's never too busy to see an aviator about any complaint, major or minor.

Chances are he'll also advise that a good preventative for this particular problem is cleanliness, including showers and fresh clothing immediately after flights.

Ted Wilbur

I ALMOST KILLED LIEUTENANT SMITH!

I pulled a real booboo this time and it's just pure luck that Lieutenant Jaygee Smith and Ensign Jones weren't killed. I'd never be able to forgive myself if the crash I caused had killed them—I had worked on that plane.

But let me start at the beginning and tell you how it happened. My name is Ratchet, I. L. I'm an AD3, assigned to Check Crew 4, and we have T-34B aircraft. *I* think I'm a good mech, and I like my job.

Last week, number 788 came into the barn for an inspection of the inverted pickup hose on the oil tank. We had to replace that hose on 81 of our planes, and that's a big job. Guess I made about seven of the changes myself—no strain, just takes time.

Well, anyway, I was doing 788's. I took the bolts off the oil tank inspection plate and got into the oil tank. The hose was shot, so I removed it. Nothing unusual so far.

I went over to the material shop and turned in the old hose to get a new one. With so many changes being made, Material was temporarily out of them. You can't put one on if you don't have it, can you?

Well, with the job stalled, I checked back with Chief Barron in engineering; told him I had the old hose out and no new one to put in. I remember very well what he said: "Okay, Ratchet, tag the plane, fill out the job sheet and leave it. We'll have more hoses in tomorrow. You can start on number 800."

I went back to 788 to get my tools and put the plate back on. I had the bolts for the plate in a paper cup. I guess I could have put them back on thumb-tight, but that seemed pointless since the plate would have to be taken off tomorrow to install the new hose. So, I just put the bolts inside the oil tank and laid the cover back in position. That was my mistake! And as I said, I'm sure

Continued next page

AN *APPROACH* REAL CONFESSION

I ALMOST KILLED LT. SMITH!

Continued

glad it didn't kill those two pilots.

I went on over to number 800 and started working on it. A couple hours later, my tooth started to ache, and I got off to go to the dentist. He looked at it and told me to come back at 1000 the next day.

Funny how little things like a toothache can set up aircraft accidents. In this case, I cleared through the engineering officer to go to the dentist again the next day. Nothing wrong with that, was there?

Well, it was while I was getting my tooth filled that the new hose for 788 came in, and with the Schedules Office screaming for availability, Engineering told Brown to finish up the job I had started the day before on 788.

Brown is a good mech, and it wasn't his fault that I had put the inspection plate bolts in the oil tank so they wouldn't get lost. He didn't know.

He got the new hose on with no trouble, and finished up the job. When he couldn't find the bolts for the plate, he went over to the tool crib and got some more. The job was finished, 788 oiled and given a ground turnup. Remember, all this happened last week.

The test hop was okay and 788 flew three flights before the pilots, Mr. Smith and Mr. Jones, took it up yesterday.

They got to 1200 feet on takeoff when the RPM dropped from 2600 to 2250. Naturally enough, they whipped it around to get back to the field. On the downwing leg, the engine quit cold and the prop froze. Mr. Smith was flying it and it looked to him like he could make the runway, so he dropped the gear. He put the flaps down just before landing.

There wasn't much damage to the plane; it hit just short of the runway and rolled up onto the concrete. The right flap was scraped and the fuselage was buckled slightly.

Naturally, when they pulled the engine apart to see what happened, they found the bust I had made. One of the bolts from the oil tank inspection plate had been pumped into the oil line and clogged it at a 90 degree elbow fitting. The engine had been starved for oil and froze.

It's going to take a new engine and some minor repairs for 788, but what if that had happened someplace else and Mr. Smith couldn't have brought the plane in? I would have killed him because I just didn't use my head. He had no possible way of knowing those bolts were in the tank.

Well, that's my whole story. I. L. Ratchet, AD3, normally a dependable gent who goofed and set up what could have been a serious accident. ●

FROM THE GROUND UP

Notes and Comments on Maintenance

SUPERVISORY RESPONSIBILITY — A young ACAN (age 18 years, with 13 months Naval service) walked into a spinning propeller of a WV-2 and received only minor injuries. The fact that this man did not receive critical injuries can be attributed to his being pulled from the propeller area by a fellow lineman in the nick of time.

The Commander, Airborne Early Warning Wing Atlantic notes that this incident falls in the category of "indoctrination and supervision" which has been preached by this command since its inception. Had the young ACAN, who had been assigned to the line division for only 35 days, been properly indoctrinated in his job and taught all safety aspects of working around aircraft and had proper supervision been administered within the line division, this incident might have been prevented.

Also, the fact that the injured man was preoccupied with the worry of a pending court martial is perhaps the reason for his unawareness of what he was doing. Nevertheless, *supervisory personnel could and should have detected this man's emotional state and assigned him other tasks.*

ANGLE-OF-ATTACK INDICATOR PROBE—Cases have been reported wherein the indications on the angle-of-attack indicator proved to be erroneous. In one case, the stall warning device actuated while the airplane was actually in a relatively safe attitude. Investigation revealed that corrosion had occurred in the angle-of-attack detector transmitter as a result of water entering the probe and

Continued next page

FROM THE

GROUND UP

Continued

running through the orifices into the paddle chamber. According to the manufacturer of the transmitter, water will not enter the probe when the aircraft is in flight unless the probe is jammed and will not rotate. However, when the airplane is on the ground, water will enter the probe if the probe cover is not installed. To ensure maximum protection of the probe, the following procedures should be adhered to:

- Install the probe cover as soon as practicable after the airplane lands to eliminate the possibility of moisture or water entering the probe.
- Under no circumstances should the airplane be washed without a protective cover installed on the probe. Be especially careful when steam cleaning in the area of the probe.
- Exercise care not to bump work stands against the probe. The slightest bend in the probe will result in erroneous indications. Do not use the probe for a handle or hand grip.

The importance of installing the probe cover as soon as practicable after the airplane lands and of exercising care in handling the aircraft so that the probes will not be bent or damaged cannot be overemphasized. Remember, the safe flight of the pilot may depend upon the efforts of maintenance personnel to safeguard the reliability of this unit.—*NAA Service News.*

ENGINE FAILURE CAUSED BY OIL STARVATION DURING THE LOFT BOMBING MANEUVER

R3350-26WA/WB—Recent reports and investigation reveal that engine failure can occur while conducting the loft bombing maneuver in AD series aircraft. The engine failures, to date, have been the result of second-order balance weight bearing failure caused by a momentary engine oil starvation.

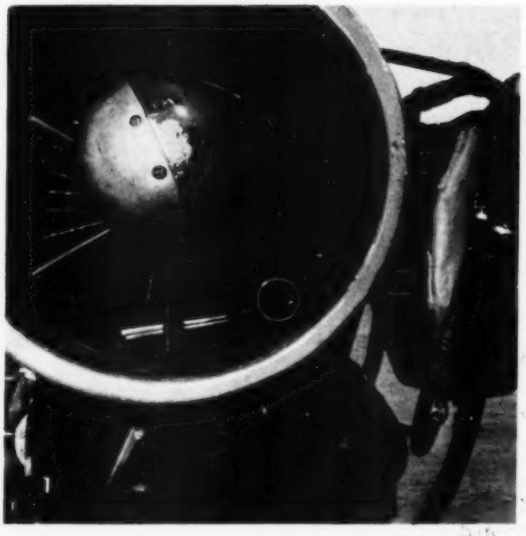
Indications are that oil starvation will result from negative acceleration which can be encountered if the maneuver is aborted after reaching the vertical position or if the maneuver is improperly conducted. Since engine failure may not immediately follow negative accelerations it is advisable to inspect engine oil sumps for metal particles on a post flight basis when loft maneuvers are conducted and each time negative acceleration has been encountered or is suspected. Engine failure reports led to instrumented test flights by DAC which indicate that a properly executed maneuver, following the standard profile, will maintain positive acceleration and will provide adequate oil to the engine at all times.

These findings are substantiated by the fact that a great number of these maneuvers have been conducted during the past four years with no engine problems. The numerous previous maneuvers also indicate that the standard profile contains adequate margin of safety. In view of the above, the following are recommendations to preclude oil starvation and subsequent engine failures.

1. *That pilots be thoroughly indoctrinated in the proper maneuver technique.*
2. *Attempt to simulate the standard profile as closely as possible.*
3. *Avoid zero or negative acceleration.*
4. *Roll out as soon as practicable after reaching the 30-degree nose-down attitude after top of loop.*
5. *That the maneuver not be aborted after reaching the vertical position.* If a buffet condition is encountered after reaching the vertical position, it is safer to ride it out and complete the maneuver. In the event of a complete loss of power, after reaching the vertical position, there is enough kinetic energy to allow completion of the maneuver.—*AD—SIS—June 1957*

TOOL CHECK, PLEASE!—The engine of an F3D-2 was being ground checked for correct adjustments and for fuel, oil and hydraulic leaks.

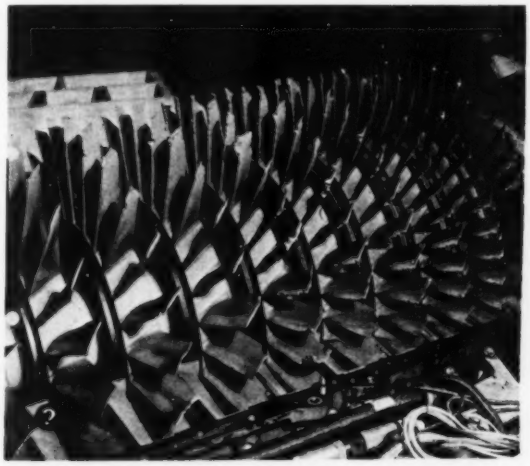
As the engine accelerated through 95% a noise



was detected and a considerable rise in TPT was noted. The engine was immediately shut down and upon removal of the inlet air screen a pair of pliers was found wedged between the inlet guide vane and the first stage compressor blades (photo 1). The pliers were removed and it was noted that the bolt and nut that holds the pliers together was missing.

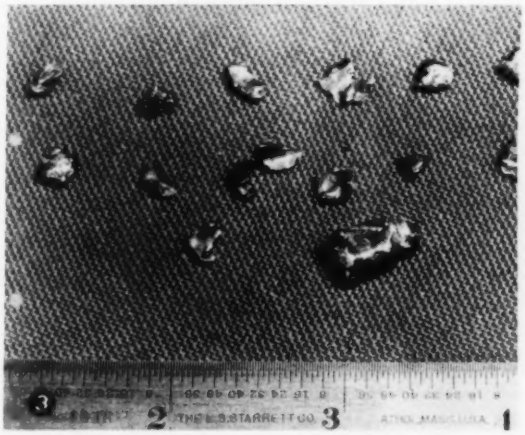
The pliers were inadvertently left in the intake scoop during engine installation. The pliers were overlooked during the inspection prior to turn-up because the already installed screen precluded a complete check of the air scoop for foreign objects.

Engine inspection revealed severe damage to the compressor section as noted in photo (2). The



turbine sustained minor damage.

Photo (3) shows the remains of the bolt and nut from the pliers that were removed from the diffuser screen.



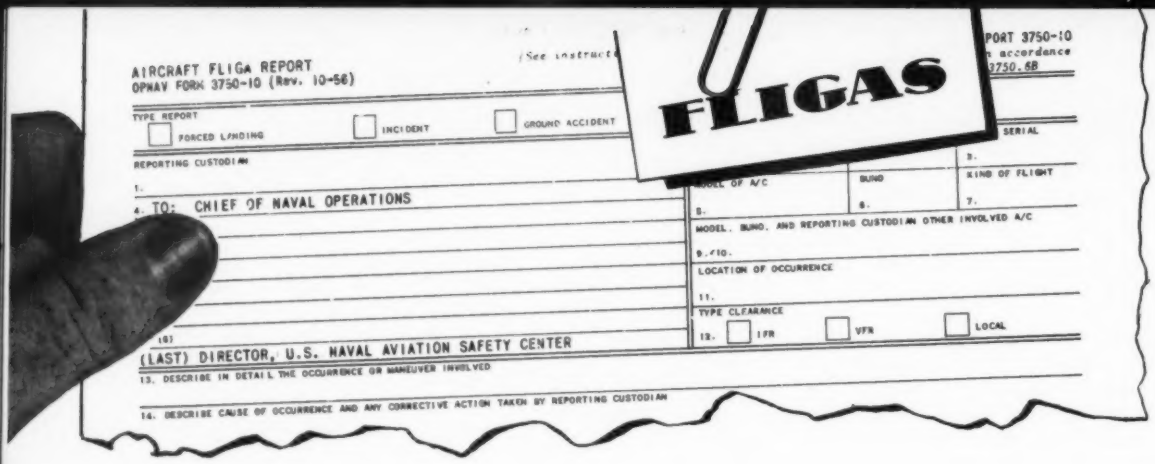
MURPHY'S LAW*

★ *IF AN AIRCRAFT PART CAN BE INSTALLED INCORRECTLY, SOMEONE WILL INSTALL IT THAT WAY.*

S2F MURPHY

It is possible to cross-connect the flexible hydraulic lines from the rudder control valves to the rudder trimmer actuating cylinder. This will cause trimmer reaction opposite to rudder throw.

Pilots and maintenance personnel should insist on good maintenance and complete ground functional check of rudder assist operation after any maintenance on this system.



⑫ **Pilot aborted takeoff in AD-4NA. Aircraft traveled length of runway and nosed up in soft terrain 35 feet from end shoulder of runway.**

⑭ **Pilot aborted take off due to low maximum power output and popping engine. His decision was late. The wind was calm and pilot did not employ brakes to maximum extent. Repeat FSO lecture on principles of physics applicable to moving objects and maximum braking power. Instructors continue to emphasize need of early decision to abort when required. Also continue review emergency stopping procedure for AD aircraft.**

COMMENTS AND RECOMMENDATIONS:

Students are not permitted to make partial power takeoffs except in those cases where the aircraft has been committed to flight and popping or rough running engine condition occurs. This incident occurred largely because the student persisted in attempting a takeoff with throttle power of 50 inches vice 57 inches. The popping, which finally convinced him, did not occur for an appreciable time after the indication of very low engine performance had become apparent. The calm wind condition and insufficient braking completed the chain of events.

It is recommended that all instructors discuss thoroughly and reindoctrinate their students with the doctrine that anything other than proper, smooth engine performance on takeoff should be indicative of an immediate aborted takeoff run. This, of course, must be coordinated with discussion of procedures to be employed once the aircraft is committed to flight and a safe landing cannot be made on the runway.

The students must understand that there is no compulsion to fly the aircraft if the engine is anything but completely satisfactory in its performance. There are no missions that transcend in importance complete safety at all times.

Maintenance engine analyzer was used. Found six (6) plugs breaking down at full power. All spark plugs Stock Number R86 ACS-AC181 changed and aircraft turned up and checked at 30" and full power. Results indicate complete elimination of difficulty.

⑬ **AN F2H-3 pilot received clearance, using NC-5 for power, then started engines. The plane captain removed the NC-5 cord, standing between th NC-5 and aircraft. He was sucked into the intake. The NC-5 driver grabbed his leg and signaled the pilot to shut down. The pilot notified the tower, and ambulance and crash crew were dispatched to the scene.**

⑭ **Plane captain was careless by standing too close to the intake. Rain gear hood restricted vision and may have influenced judgment of distance. All plane captains have again been reminded of the danger of working close to the intake during engine operations.**

⑬ **Hydraulics man leaned in cockpit of an F9F-5 to inspect hydraulic brakes. Emergency hydraulic pump was ON. As the man leaned over he inadvertently contacted the canopy control and the canopy closed on him, causing fractured ribs and collarbones. Another mech in the pilot's seat immediately reversed canopy control position avoiding further injury. Canopy ground safety locks were not being used.**

⑭ **Inadvertent movement of the canopy control. Canopy ground safety lock Part No. R82 GR-GT-626 will be used in all future ground maintenance operations unless canopy removed.**

Recommendation: The subject canopy ground safety locks were not delivered with the aircraft. Substitute canopy locks now on order. It is recommended that this report be given wide dissemination to all activities utilizing F9F aircraft.

⑬ **After placing the canopy in the full open position, parking the aircraft, and securing the engine, the pilot placed his left hand on the windshield and his right hand on the forward part of the open canopy in preparation to vacate the cockpit. From this position the pilot departed the cockpit with a springing motion which caused the weight of his body to be distributed through his arms as his feet were placed over the starboard side of the cockpit. As this occurred, the metal male end of the pilot's anti-G suit plug-in attachment detached from the aircraft anti-G suit receptacle and struck the canopy jettison switch with sufficient force to break the plastic safety cover. The cartridge fired, causing the canopy to jettison and the resultant action caused minor injury to the pilot's right hand.**

⑭ **The pilot failed to unplug the metal male end of his anti-G suit attachment from the female anti-G suit receptacle, and used faulty procedure for departing the aircraft cockpit. Pilots and maintenance personnel are continually cautioned against inadvertently activating the canopy jettison switch. A review of the proper procedure for departing the cockpit of AD-6 model aircraft is being disseminated to all pilots.**

⑬ **An F2H-P on practice of loft maneuvers: Upon the completion of one Cuban 8, performed between 10,000 and 16,000 feet with 100% power and a positive acceleration of 3G, a five-minute period of level flight was performed at 95% power. As 100% power was applied the port engine suddenly commenced vibrating. The engine was shut down and the aircraft returned to base without further incident. There was no indicaffon to the pilot of engine failure.**

⑭ **Investigation of engine indicates a possible compressor stall was encountered and subsequently turbine was overtemped.**

⑬ **An airman was plane captain of an AD parked two rows back in the prop plane pack for Air Group flyaway. Upon start of the launch while the jets were taxiing to position forward, the P. C. attempted to avoid the jet blast and heat and stepped into the prop.**

⑭ **Commanding officer again cautioned all topside personnel of extreme danger working on flight deck. All pilots and supervisory personnel were advised of the necessity of safety and close observation of men and techniques used in aircraft handling and the importance of personal knowledge of all people involved and their morale to keep them interested and alert in a difficult and dangerous job.**

⑬ **SNB-Shortly after takeoff, while in a climbing right turn at 800 ft. the left outboard rudder cable chafed the landing gear actuating motor electrical leads causing electrical short and burning rudder cable through.**

⑭ **Improper routing of landing gear actuating motor electrical leads. Pertinent check-sheet items have been re-emphasized to all maintenance personnel concerned.**

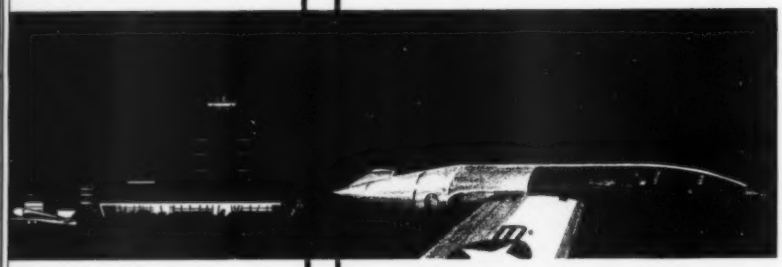
⑬ **J65 engine was being removed from FJ-3 airframe. Weight of the engine was being supported by a chain hoist and a sling (part number E-2568). At the time of the accident, the engine was free of the main mounting trunnions, and the front stabilizer mount was all the way aft against safety pins on the monorail which guides the engine into the airframe. The turnbuckle of the sling was being adjusted to proper position, so that the engine could be removed from the monorail.**

The main landing gear oleos suddenly expanded, raising the fuselage and pivoting the engine, which caused the starter generator cover to bind against the top after section of the inlet

duct. This condition transmitted weight supported by the engine hoist to the monorail which broke; the engine then pivoted about the aft sling attachment point, striking the fuselage bulkhead at station 236.25.

⑭ **Cause of occurrence was sudden and rapid extension of the oleos when engine was free of trunnion supports but still attached to the monorail. Oleos should be restrained from extending as engine weight is removed.**

TIP TANK



Miscellaneous aviation safety information

GEAR RETRACTION ALTITUDE

Gear retraction altitude was discussed with regards to the term "when safely airborne." The board opinioned that most pilots have become too automatic in calling for GEAR UP and have not taken into consideration runway length and wind component. On long runways or runways having strong wind component, the gear retraction should be delayed to the point where a safe landing could no longer be accomplished on the takeoff runway. It was recommended all pilots review takeoff techniques with regard to above.—*VR-1*

DETOURS OFF AIRWAYS

Detours off airways to avoid thunderstorms were discussed. ARTC can control traffic only on the airways and it was suggested that these detours be kept to a minimum in number and distance and ARTC advised. This matter has been the subject of previous discussions and letters, and undoubtedly requires, amongst other things, amendment to the Civil Air Regulations and traffic procedures, and we understand is being considered at the Washington level.—*ALPA Denver Area Safety Meeting*

HARD LANDINGS

All pilots are reminded that when an aircraft is subjected to a hard landing the aircraft must be given a thorough visual inspection and the landing gear will be drop checked through three complete cycles in accordance with T.O. 8-56.

If the visual inspection reveals any damage, the landing gear and its associated parts will be given a magnetic particle inspection. Pilots are reminded of the importance of reporting any hard landing in the aircraft discrepancies log.—*FLogWingsLant*

JET ICING

Engine icing is believed to have caused the recent loss of two F3H jet aircraft flying in clouds associated with thunderstorms. Under such conditions ice accretion can be phenomenally rapid.

It is to be emphasized that at temperatures below zero ice is a possibility in any cloud and a probability in clouds near thunderstorms.

In anticipation of increased thunderstorm activity during the ensuing summer months due caution should be exercised against such hazard, and de-icing systems should be activated prior to entry into suspected or possible icing conditions.—*AirLant Note 3750*

CHARACTER DEPARTMENT.

This incident occurred some time ago but . . .

An eager young pilot departed from a northeastern air base for Podunk Airport. He was assigned IFR one on top, New York airways to destination. The ATC traffic controller required that he hold over the St. James intersection and advised that further clearance would be issued at 1055E. No ARTC clearance was received at that time.

Twenty minutes later this pilot realized that to keep his bird in the blue he would have to requisition some go-juice. Suffolk County Air Force Base was nearby so without ARTC clearance he let down, landed, refueled and climbed back into the holding pattern! He then called ATC and wanted to know why he was being held so long ! ! !—*Flight Service Bulletin*

Answers to "Distress Quiz" on page 24.

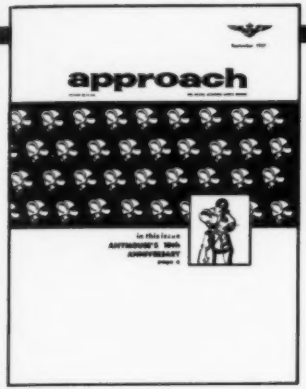
① Use "Pan" when your situation requires urgent action. "Mayday," of course, is for serious and imminent danger and you require immediate assistance

② Left turns.

③ One-minute legs. (reciprocators use two-minute legs).

④ Turns of 120 degrees, one-half needle width (1½ degrees per second).

If you've missed any questions, pick up a copy of the Supplementary Flight Information Document and get the full story on distress procedures.



approach

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Well Done

Langland, W. R. AD2, second from left, explains "how he did it" to Renfro, E. S., AT3, Clark, J. A., AD1 and Graham, L. D., ADC. Langland performed his plane captain's duties in an "outstanding" manner to assist his PPC in bringing his plane home safely in an emergency situation.

THROUGH the industry and ingenuity of Plane Captain W. R. LANGLAND, AD2, a P4M of VQ-1 didn't have to land with the nosewheel retracted and an accident was averted.

Shortly after takeoff, a hydraulic leak developed in the Mercator and the pilot, LCDR Gerald McMorrow was forced to return to base. When he attempted to lower the landing gear, nothing happened. Orbiting the field, the main gear was successfully lowered by emergency methods but the nose gear refused to go down.

Plane Captain Langland took over to use brains and brawn where mechanisms failed. He chopped out the nosewheel observation window and reached through to try and force the locking device. For leverage, he took the barrel from the deck turret .50 cal gun and wedged the up lock so that the nosewheel dropped to a partially extended position.

It was Langland's habit to carry a "spare" length of line in his aircraft so, battling the slipstream, he secured the line to the strut and tried to force extension. Five other crewmembers formed a "working party" to heave on the line—the strut didn't budge.

It was getting dark and the pilot had to decide whether to make a nosewheel-up landing before sunset or to continue the orbit and allow more working time. LCDR McMorow had confidence in Langland's ability to extend the gear and continued to circle the field.

Langland next chopped a hole in the deck of the aircraft immediately above the nosewheel, stepped down through this hole and jumped on the tire while the crew tugged on the line. It moved about four more inches.

Finally Langland chopped a hole in the emergency hydraulic reservoir and poured in a gallon of hydraulic fluid. With the hydraulic push assisted by the crew tugging on the rope and Langland bouncing up and down on the tire, the nosewheel went down. To lock it in the extended position, he inserted the locking pin.

The landing was "routine" after a 4-hour delay. To Aviation Machinist's Mate Second-Class W. R. Langland, "WELL DONE."

Anymouse is celebrating his tenth anniversary with the Navy. Though he has been helping the Naval Aviation Safety Center and the entire fleet for only four years, he was actually called to duty in 1947 at VR-31.

Four years is long enough to permit a glance over the trail already covered to see what significance the Anymouse program has had. Taking a few liberties with a mythical crystal-ball, it is also possible to make some general "guestimates" about the future of Anymouse.

It may be that the "personal experience" slant of Anymouse accounts for his popularity. Certainly every man who has "boo-booed" or had a hazardous experience around airplanes will feel some kinship with the hairy tales printed in *Approach*. Anymouse could be your PPC or plane captain, or, *it could be you*. Reader identification it's called, and the next time you go earn your flight pay you might remember what happened to a fellow just like yourself who stretched his gas supply or tried to take off without a "freedom of controls" check.